



**ENGINEERED
PRODUCTS CO.**

Welcome to Engineered Products Company (EPCO)®!

Engineered Products Company (EPCO) is the premier brand supplier of specialty products to Electrical Distributors and Contractors. EPCO has supported and been a part of the electrical industry since 1976 by supplying a broad range of standard and unique consumables for commercial, industrial, residential, and agricultural buildings. Our reliable, durable, and quality products are designed and engineered with innovative product features specifically intended to save installation time and cost.

All of our standard cataloged products are in stock in our 86,000 square foot warehouse and available for immediate shipment. We are committed to providing our customers with the “complete” quality customer service experience from technical support, easy ordering, shipping orders 100% complete in 24 hours or less, comprehensive post sale technical support, and “hassle-free” returns.

CUSTOMIZING CAPABILITIES TO MEET YOUR BUSINESS NEEDS

With over 40 years of manufacturing expertise specializing in fixture whips, power whips, distribution cable assemblies, specialty lighting, ground bonding, and wire harness assemblies, we provide complete customization and fabrication services that provide solutions built according to your individual specifications that meet your application requirements.

Using our extensive knowledge of wire-related materials and processes, combined with a broad network of support suppliers and channel partners, we can customize our existing product(s) to meet your needs, or quickly prototype, manufacture, and ship your custom “design-build” product at a competitive price.

Engineered Products Company (EPCO) can design custom solutions from your specifications, sketches, or drawings and oversee production. These core competencies add sustainable value to our customers:

- “Smart” customization products and services tailored to your needs
- Engineering specifically for design-build products
- Quick turn prototypes
- Integral supply chain partnerships
- Competitive pricing
- Commitment to quality, excellent responsiveness, and on-time delivery

EPCO is the industry leader in the development and manufacturer of fixture and power whips with over 300+ configurations immediately available. We can customize and cost effectively produce any fixture whip or power whip in any length, wire gauge size, with your choice of steel or liquid tight conduit with specificity for inside and outside diameters, or unique applications that require motion, vibration, or bending capability.

In addition, our advanced engineering capabilities enable us to easily develop your fixture whip or power whip to connect and energize any lighting system luminaires or ground-bonding device to satisfy your application requirements.

Continued on Inside Back Cover...

Our Most Important Product Doesn't Come In A Box!



At Engineered Products Company (EPCO), our most important Product is Service. This means every shipment you receive includes some very important extras:

- Prompt Customer Response
- Exceptional Order Fill Rates
- On Time Delivery
- Lower Transaction Cost
- Sales Order Accuracy
- Competitive Prices

You get nationwide support from our network of EPCO Representatives, professionals who can answer all your questions. And we also pack a promise...“Our Guaranteed Sales Policy”. Any Products you are unable to sell may be returned to EPCO for a 100% credit — Guaranteed!

See why there isn't a box big enough to hold our most important product.

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- **RETROFIT LIGHTING**
- **UTILITY LIGHTING**
- **FIXTURE WHIPS**
- **TEMPORARY LIGHTING**
- **TUBE GUARDS**
- **LANDSCAPE LIGHTING**



**CUSTOM CAPABILITIES
AVAILABLE!**

LIGHTING PRODUCTS

LINEAR LUMINAIRES

Engineered Products Company's energy efficient and cost-effective linear solid-state LED Strip, T5 and T8 LED, and Fluorescent vapor tight luminaires meet a very broad variety of commercial and industrial lighting applications. These luminaires are ETL or UL listed and have a NEMA 4X, IP65/66/67 rating for use in "damp" or "wet" environments.

LED LINEAR LUMINAIRES

Our standard vapor tight LED Strip luminaires provide high efficacy, no lumen maintenance, reliable, and durable high performance features that meet all Federal, State, and local Utility and Co-operative energy efficiency program requirements throughout the United States and Canada.

T5 AND T8 LED LINEAR LUMINAIRES

EPCO's linear vapor tight luminaires using T5 and T8 LED Lamps are equally energy efficient as our LED Strip luminaires and can be operated in any "damp" or "wet" location environment. These luminaires are 30 - 40% more efficient than fluorescent lamps, provide illumination where it is needed, have full dimming capabilities, and are easily integrated with occupancy sensors and other energy-saving lighting controls. And the life expectancy of T5 and T8 LED Lamps is not affected by cycling the luminaires on and off.

FLUORESCENT LINEAR LUMINAIRES

We continue to manufacture energy efficient and long life vapor tight luminaires using T5 and T8 linear fluorescent lamps (LFLs). And when coupled with high efficiency electronic ballasts, this combination allows building owners and facility managers to take advantage of energy savings and utility rebates to lower the overall installed cost. The luminaire housing shares the same specifications used with our LED Strip and the T5 and T8 LED linear luminaires.

LINEAR LUMINAIRES

LED LINEAR LUMINAIRES

LED LUMINAIRE SERIES

EPCO's LED Luminaires are available in nineteen (19) configurations that are vapor tight, provide unparalleled performance, improved efficacy, more lumens per watt, and are the reliable, sustainable solid-state illumination system solution.

These energy efficient luminaires provide significant energy savings and improved thermal dissipation that translates into optimized lumen output suitable for operating in indoor, outdoor, and "wet" location environments.

With a minimum life expectancy of 200,000 hours, these luminaires consume less than half the wattage output of a 4-foot luminaire using two (2) or three (3) 32-Watt T8 fluorescent lamps.

EPCO's LED Luminaires are shipped ready for immediate installation.

Industry Standard Illumination Solutions and Warranty

EPCO's LED Luminaires are ETL listed and meet UL 1598 Standards. We back our LED Luminaires with a 5-year warranty.

Meets the requirements of the 2017 National Electrical Code: Articles 410.10(A), 410.104(A), 410.130(G)(1), 547.5(C)(1) and (2), and 547.8(A) and (B).

Note: EPCO LED Luminaires do not meet provisions for:

- Class I Locations — where flammable vapors and gasses may be present.
- Class II Locations — where combustible dust may be found, or
- Class III Locations — hazardous because of the presence of ignitable fibers.

***DesignLights Consortium (DLC V4.0) Approved:** The Qualified Products List (QPL) from DLC is a resource for Electric Utilities and Regional Electric Cooperatives (RECs) Program Administrators to help them select what solid-state illumination products will be included in their Energy Efficiency Programs.



NEMA 4X



IP65 CERTIFIED

IP66 CERTIFIED

IP67 CERTIFIED



STANDARD LED LUMINAIRE

TYPICAL APPLICATIONS:

- Parking Garages and Parking Canopies (DLC Approved)*
- Food Processing Facilities
- Commercial Kitchens
- Refrigerators and Freezers
- Warehouses**
- Industrial Facilities**
- Commercial Buildings
- Elevator Shafts
- Outdoor Shopping Centers
- Storage Buildings
- Pedestrian and Road Tunnels
- Car Washes**
- Laundries
- Locker Rooms
- Saunas
- And more...

** Certain chemicals that may exist in end-user locations release airborne contaminants that can impact the integrity and safety of key luminaire components that contain acrylic or polycarbonate material.

The Chemical Resistance of Plastics Chart (posted on EPCO's website) provides an overview of those chemical compounds where this LED Luminaire should not be installed!

SPECIFICATIONS

Environmental	Suitable for indoor, outdoor, and wet locations
Ambient Operating Temperature	<ul style="list-style-type: none"> • -20°F to 122°F (-30°C to 50°C) Suitable for elevated ambient temperatures • 0°F to 113°F (-17°C to 45°C) Battery Backup Option
Operating Voltage	120V - 277 @ 50/60 Hz
Power Factor	.9 or Higher
Total Harmonic Distortion	Less than 20%
LED Driver Efficiency	83% (typical) @ 120VAC — Full Load 83% (typical) @ 220VAC — Full Load
Ingress Protection Rating	IP65, IP66, IP67 / NEMA 4X
Dimming Control	10%-100%; Requires 0-10V Luminaire Control Switch/Device
Industry Certifications	ETL Listed (per UL 1598/8750); RoHS Compliant; LM-79** and LM-80 Reports

**See the LED RetroFit Conversion Kit product data sheet (E02-150-012) for more information about the LM79 Report.

STANDARD LED LUMINAIRES

Lamp Equivalent	Luminaire Model	Luminaire Length	Luminaire Type	Luminaire Designation FX = New Fixture	Luminaire Application S = Standard	Correlated Color Temperature (CCT)*	Color Rendering Index (CRI)	Total Luminaire Wattage	Lumens (Brightness)	Luminous Efficacy (Energy Efficiency)
(3) F17T8	G2LED-FX-S3528	G2	LED	FX	S	3500K	82	28	3043	105
(3) F17T8	G2LED-FX-S4128	G2	LED	FX	S	4100K	82	28	3295	112
(3) F17T8	G2LED-FX-S5028	G2	LED	FX	S	5000K	81	28	3549	119
(2) F32T8	G4LED-FX-S3034	G4	LED	FX	S	3000K	84	35	3451	100.3
(2) F32T8	G4LED-FX-S3534	G4	LED	FX	S	3500K	84	35	3554	103.3
(2) F32T8	G4LED-FX-S4134	G4	LED	FX	S	4100K	84	35	3660	106.3
(2) F32T8	G4LED-FX-S5034	G4	LED	FX	S	5000K	84	35	3859	108.7
(3) F32T8	G4LED-FX-S3051	G4	LED	FX	S	3000K	84	58	5672	97.2
(3) F32T8	G4LED-FX-S3551	G4	LED	FX	S	3500K	84	58	5843	100.1
(3) F32T8	G4LED-FX-S4151	G4	LED	FX	S	4100K	84	58	6017	103.1
(3) F32T8	G4LED-FX-S5051	G4	LED	FX	S	5000K	84	58	6292	107.8
(4) F32T8	G8LED-FX-S3068	G8	LED	FX	S	3000K	84	70	6902	100.3
(4) F32T8	G8LED-FX-S3568	G8	LED	FX	S	3500K	84	70	7108	103.3
(4) F32T8	G8LED-FX-S4168	G8	LED	FX	S	4100K	84	70	7320	106.3
(4) F32T8	G8LED-FX-S5068	G8	LED	FX	S	5000K	84	70	7718	108.7
(6) F32T8	G8LED-FX-S30102	G8	LED	FX	S	3000K	84	116	11345	97.2
(6) F32T8	G8LED-FX-S35102	G8	LED	FX	S	3500K	84	116	11685	100.1
(6) F32T8	G8LED-FX-S41102	G8	LED	FX	S	4100K	84	116	12035	103.1
(6) F32T8	G8LED-FX-S50102	G8	LED	FX	S	5000K	84	116	12584	107.8

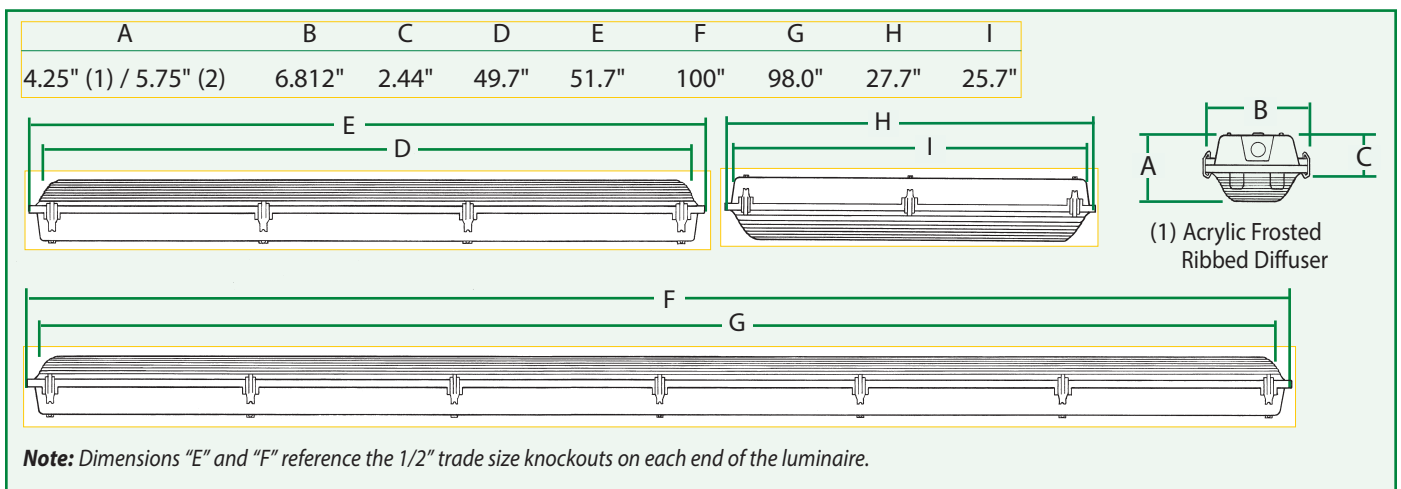


Note: Nominal color designation in units of Kelvin

SHIP WEIGHT (APPROXIMATE):

- 2-Foot LED Luminaire: 8 lbs. (3.62kg)
- 4-Foot LED Luminaire: 13 lbs. (4.98kg)
- 8-Foot LED Luminaire: 21 lbs. (8.61kg)

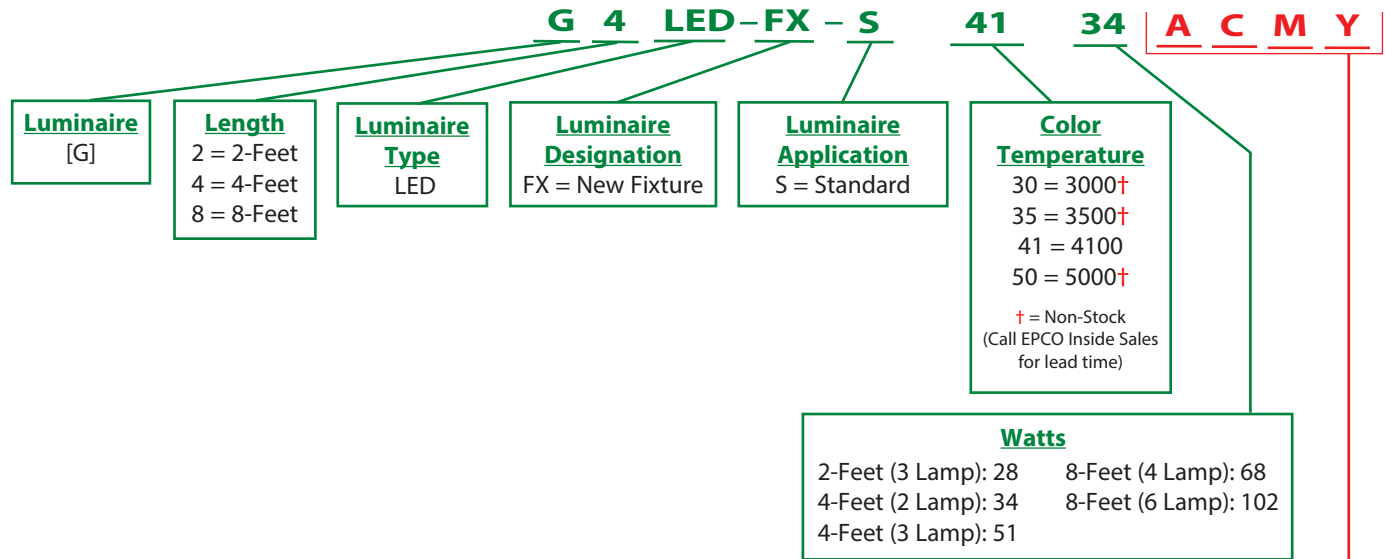
Note: Bulk packaging is available for the Standard LED Luminaire Series that eliminates individual carton packaging — Select "Option Z" in the Ordering Information Example (25 or 50 per skid).



LINEAR LUMINAIRES

LED LINEAR LUMINAIRES

ORDERING EXAMPLE — LED LUMINAIRE SERIES



LED Luminaire Series Options

The Standard LED Luminaire can be built to your specifications by adding options as "part" of your part number.

Option	Notes	
A. 6-Foot Power Cord (PSS6)	Straight Plug, 13 AMP	
A1. 6-Foot Twist Lock Power Cord (See Page 11)	L5-15P, 120V	
A2. 6-Foot Twist Lock Power Cord (See Page 11)	L7-15P, 277V	
C. Acetal (Plastic) Latches (See Page 11)	Not recommended for the following applications: Swimming Pools because of the chlorine; Car Washes because of the chemicals used; Food Processing because of the cleaning chemicals; Agriculture because of the ammonia gas.	
E. Emergency LED Backup Driver	Non-Stock — Call EPCO Inside Sales for lead time	
F. One (1) 1/2" Water Resistant Hub	Required for Pendant Mounting a 2-foot or 4-foot luminaire.	When adding the Water Resistant Hubs the UL listing changes from a "wet" location to a "damp" location luminaire.
G. Two (2) 1/2" Water Resistant Hubs	Required for Pendant Mounting an 8-foot luminaire.	
H. One (1) 3/4" Water Resistant Hub	Required for Pendant Mounting a 2-foot or 4-foot luminaire.	
M. Ceiling and Wall Mount Mounting Hardware (See Page 13)	Powder Coated, Standard (Not NSF approved for food service applications)	
M1. Ceiling and Wall Mount Mounting Hardware (See Page 13)	Stainless Steel (National Sanitation Foundation approved)	
M2. Wall Mount Stainless Steel Mounting Hardware (See Page 13)	45° Angle (National Sanitation Foundation approved)	
P. Acrylic Clear Ribbed Diffuser (See Page 12)		
P1. Tall Frosted Diffuser (See Page 12)		
R1. PIR Occupancy Sensor (for dry locations) R2. PIR Occupancy Sensor (for dry locations/cold locations) R3. PIR Occupancy Sensor (for wet locations) R4. Microwave Occupancy Sensor (On/Off Only) R5. Microwave Occupancy Sensor (0-10V Dimming 30%) R6. Microwave Occupancy Sensor (0-10V Dimming 50%)(See Page 11)	Two Occupancy Sensors are available: A. High/Medium Bay Passive Infrared (PIR) Occupancy Sensors: Recommended for ceiling heights 15-feet or higher. PIR sensors function as an automatic lighting control in high and medium bay applications. B. Microwave Sensors: Recommended for ceiling heights 15-feet or lower. The microwave sensor detects the slightest movement in the occupancy zone. Detection is sensed through doors, glass, or thin walls.	
S. Stainless Steel Latches (See Page 11)		
Y. Surface Mount Bracket (See Page 14)	EPCO will pre-drill a hole in the luminaire housing at the designated "number" location as shown in the diagrams on page 14, to facilitate pulling the supply conductors from the junction box and into the luminaire housing.	
Z. Bulk Packaging	25 or 50 per skid (eliminates individual carton packaging on the job site). When entering Bulk Packaging orders, do not include Mounting Hardware or Tamper Resistant Screws in your part number.	

T5 AND T8 LED AND FLUORESCENT LAMPS LUMINAIRE SERIES

All four luminaire configurations are rated for long life, energy efficiency, and more uniform lumen distribution. These vapor tight luminaires can be used for high or low ceiling applications that translate into improved efficacy by providing more usable lumens per watt.

BENEFITS

- UL Listed. File #: E319552. Suitable for indoor, outdoor, or wet locations.
- Fast installation saves time and reduces labor cost.
- Meets the requirements of the 2017 National Electrical Code: Articles 410.10(A), 410.104(A), 410.130(G)(1), 547.5(C)(1) and (2), and 547.8(A) and (B).
- **Note:** EPCO Vapor Tight Luminaires do not meet provisions for:
 - Class I Locations — where flammable vapors and glasses may be present.
 - Class II Locations — where combustible dust may be found, or
 - Class III Locations — hazardous because of the presence of ignitable fibers.
- Ingress Protection — Dust and moisture resistant luminaire; suitable for use in wet locations where high-power pressure wash-down is required. LED and Fluorescent Luminaires are NEMA 4X, IP65, IP66, and IP67 rated.
- Luminaire Mounting Hardware allows the contractor to pre-install the mounting brackets to the mounting surface without drilling into the luminaire housing.
- Impact resistant acrylic diffusers withstand breakage from high power pressure washers; lowers replacement and maintenance costs.
- Solid reinforced luminaire housings provide rigidity with no deflection. The luminaire housing is rated 5VA-F1 fiberglass.*
- "Captive" Acetal (Plastic) or Stainless Steel Latches.
- 100% factory tested before shipping. No contractor callbacks!
- Two (2) 1/2" trade size knockouts on each end of the luminaire housing accommodates standard conduit fittings.

***Note:** Quantified and tested by Underwriters Laboratories, reference UL 746C.

Note: The Wide Body T5 and T8 LED and Fluorescent Luminaire are only available in 4-foot lengths!

FLUORESCENT BALLAST SPECIFICATIONS

Ballast Type/Minimum Starting Temperature	Electronic T5 or T8 Class P Thermally Protected and CEE NEMA Premium Compliant: <ul style="list-style-type: none"> • T5 — High/Standard Output: -20°F (-28°C) • T8 — Standard Output Ballast: 0°F (-17°C) • T8 — High Ballast Factor (HBF): -20°F (-28°C) Note: High Ballast Factor is a system operating a standard output lamp to a higher wattage and lumen performance within standard lamp design. High Output (HO) lamps operate with a higher current, thereby requiring ballasts to match the high output lamp designation and design.
Operating Voltage	120V - 277 @ 60 Hz
Recommended Lamp Types	T5 Lamps or T8 Lamps Warning: T8 HO and T8 VHO Lamps must not be used under any circumstances! You will damage the luminaire and void the warranty!
Industry Certifications	UL Listed (per UL 1598)



T5 AND T8 LED LUMINAIRE (NARROW AND WIDE BODY)

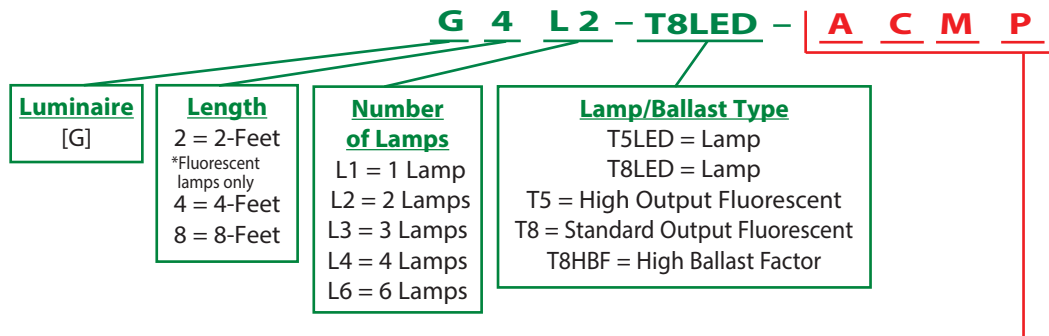


FLUORESCENT LUMINAIRE (NARROW AND WIDE BODY)

TYPICAL APPLICATIONS

- Food Processing Facilities
- Commercial Kitchens
- Laundries
- Industrial Facilities
- Saunas
- Car Washes
- Storage Buildings
- Pedestrian and Road Tunnels
- Parking Garages
- Elevator Shafts
- Refrigerators and Freezers
- Locker Rooms

ORDERING EXAMPLE — NARROW BODY T5 AND T8 LED AND FLUORESCENT LAMP



Narrow Body Luminaire Options

Narrow Body Luminaires can be built to your specifications by adding the respective item numbers. Narrow Body LED Lamp Luminaires and Narrow Body Fluorescent Luminaires do not include lamps. **Note:** We recommend using only Type B Single-End Powered Bi-Pin T5 or T8 LED Lamps. *Fluorescent Luminaires Only.

Option	Notes
A. 6-Foot Power Cord (PSS6)	Straight Plug, 13 AMP
A1. 6-Foot Twist Lock Power Cord (See Page 11)	L5-15P, 120V
A2. 6-Foot Twist Lock Power Cord (See Page 11)	L7-15P, 277V
*B. Basic Specular Reflector	Can be used with either the Acrylic Ribbed or Clear Diffuser
C. Acetal (Plastic) Latches (See Page 11)	<u>Not</u> recommended for the following applications: Swimming Pools because of the chlorine; Car Washes because of the chemicals used; Food Processing because of the cleaning chemicals; Agriculture because of the ammonia gas.
*E. Emergency Battery Back-up Ballast	Two (2) lamps is the maximum lamp configuration when specifying a T5 2-foot luminaire with an Emergency Battery Back-up Ballast.
F. One (1) 1/2" Water Resistant Hub	Required for Pendant Mounting a 2-foot or 4-foot luminaire.
G. Two (2) 1/2" Water Resistant Hubs	Required for Pendant Mounting an 8-foot luminaire.
H. One (1) 3/4" Water Resistant Hub	Required for Pendant Mounting a 2-foot or 4-foot luminaire.
I. Two (2) 3/4" Water Resistant Hubs	Required for Pendant Mounting an 8-foot luminaire.
M. Ceiling and Wall Mount Mounting Hardware (See Page 13)	Powder Coated, Standard (Not NSF approved for food service applications)
M1. Ceiling and Wall Mount Mounting Hardware (See Page 13)	Stainless Steel (National Sanitation Foundation approved)
M2. Wall Mount Stainless Steel Mounting Hardware (See Page 13)	45° Angle (National Sanitation Foundation approved)
P. Ribbed Frosted Diffuser (See Page 12)	Standard on all Narrow Body T5 and T8 LED Luminaires
*Q. Acrylic Clear Tall Diffuser (See Page 12)	The Acrylic Clear Ribbed Diffuser is standard with all Narrow Body Fluorescent Luminaires unless specified. Not available for the 2-foot Narrow Body Luminaire.
R1. PIR Occupancy Sensor (for dry locations) R2. PIR Occupancy Sensor (for dry locations/cold locations) R3. PIR Occupancy Sensor (for wet locations) R4. Microwave Occupancy Sensor (On/Off Only) R5. Microwave Occupancy Sensor (0-10V Dimming 30%) R6. Microwave Occupancy Sensor (0-10V Dimming 50%) (See Page 11)	Two Occupancy Sensors are available: A. High/Medium Bay Passive Infrared (PIR) Occupancy Sensors: Recommended for ceiling heights 15-feet or higher. PIR sensors function as an automatic lighting control in high and medium bay applications. B. Microwave Sensors: Recommended for ceiling heights 15-feet or lower. The microwave sensor detects the slightest movement in the occupancy zone. Detection is sensed through doors, glass, or thin walls.
S. Stainless Steel Latches (See Page 11)	
*W. Wide Specular Reflector (See Page 12)	Can only be used with two (2) lamp 4-foot or four (4) lamp 8-foot Narrow Body Luminaires, and can only be used in conjunction with the Acrylic Clear Tall Diffuser (Option Q). The Standard Acrylic Ribbed Diffuser will not fit! The Wide Reflector <u>WILL NOT</u> fit a 2-foot Narrow Body Luminaire.
Y. Surface Mount Bracket (See Page 14)	EPCO will pre-drill a hole in the luminaire housing at the designated "number" location as shown in the diagrams on page 14, to facilitate pulling the supply conductors from the junction box and into the luminaire.
Z. Bulk Packaging	25 or 50 per skid (eliminates individual carton packaging on the job site). When entering Bulk Packaging orders, do not include Mounting Hardware or Tamper Resistant Screws in your part number.

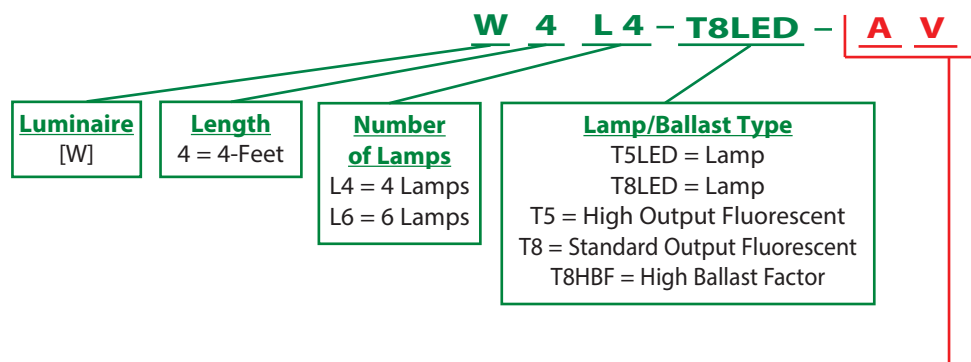
SHIP WEIGHT (APPROXIMATE):

- 2-Foot Narrow Body Fluorescent Luminaire: 8 lbs. (3.62kg)
- 4-Foot Narrow Body Fluorescent Luminaire: 13 lbs. (5.89kg)
- 4-Foot Narrow Body LED Lamp Luminaire: 13 lbs. (5.89kg)
- 8-Foot Narrow Body LED Lamp Luminaire: 21 lbs. (9.52kg)
- 8-Foot Narrow Body Fluorescent Luminaire: 21 lbs. (9.52kg)

Note: Ship weights are based on standard part numbers.

 EPCO Wide Body Luminaires are Made in the USA.
(from domestic and globally sourced components)

ORDERING EXAMPLE — WIDE BODY T5 AND T8 LED AND FLUORESCENT LAMP



Wide Body Luminaire Options

Wide Body Luminaires can be built to your specifications by adding the respective item numbers. Wide Body LED Lamp Luminaires and Wide Body Fluorescent Luminaires do not include lamps. **Note:** We recommend using only Type B Single-End Powered Bi-Pin T5 or T8 LED Lamps. *Fluorescent Luminaires Only.

Option	Notes	
A. 6-Foot Power Cord (PSS6)	Straight Plug, 13 AMP	
A1. 6-Foot Twist Lock Power Cord (See Page 11)	L5-15P, 120V	
A2. 6-Foot Twist Lock Power Cord (See Page 11)	L7-15P, 277V	
*E. Emergency Battery Back-up Ballast		
G. Two (2) 1/2" Water Resistant Hubs	Required for Pendant Mounting an 8-foot luminaire.	When adding the Water Resistant Hubs the UL listing changes from a "wet" location to a "damp" location luminaire.
I. Two (2) 3/4" Water Resistant Hubs	Required for Pendant Mounting an 8-foot luminaire.	
N. Wide Body Specular Reflector (See Page 12)		
R1. PIR Occupancy Sensor (for dry locations) R2. PIR Occupancy Sensor (for dry locations/cold locations) R3. PIR Occupancy Sensor (for wet locations) R4. Microwave Occupancy Sensor (On/Off Only) R5. Microwave Occupancy Sensor (0-10V Dimming 30%) R6. Microwave Occupancy Sensor (0-10V Dimming 50%)(See Page 11)	Two Occupancy Sensors are available: A. High/Medium Bay Passive Infrared (PIR) Occupancy Sensors: Recommended for ceiling heights 15-feet or higher. PIR sensors function as an automatic lighting control in high and medium bay applications. B. Microwave Sensors: Recommended for ceiling heights 15-feet or lower. The microwave sensor detects the slightest movement in the occupancy zone. Detection is sensed through doors, glass, or thin walls.	
V. V-Hooks	Two (2) per Package	
Z. Bulk Packaging	25 or 50 per skid (eliminates individual carton packaging on the job site)	

Note: Two (2) Wide Body T5 or T8 LED Luminaires is the minimum order quantity. We will not ship any Wide Body T5 or T8 LED Luminaires that do not meet the minimum order quantity requirement!

SHIP WEIGHT (APPROXIMATE):

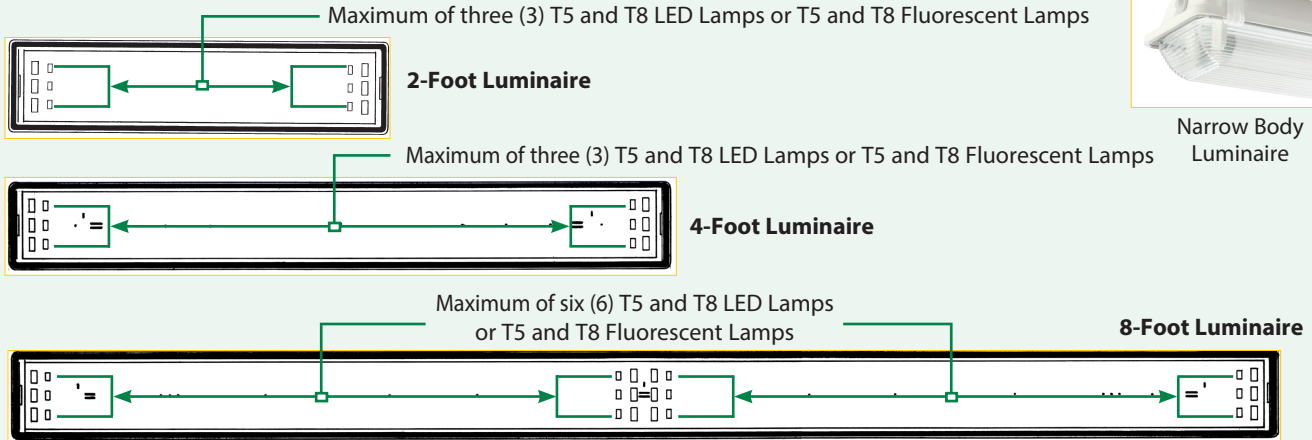
- 4-Foot Wide Body Fluorescent Luminaire: 26 lbs. (11.79kg)
- 4-Foot Wide Body LED Lamp Luminaire: 23 lbs. (10.43kg)

Note: Ship weights are based on standard part numbers.

LINEAR LUMINAIRES

T5 AND T8 LED AND FLUORESCENT LINEAR LUMINAIRES

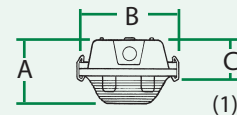
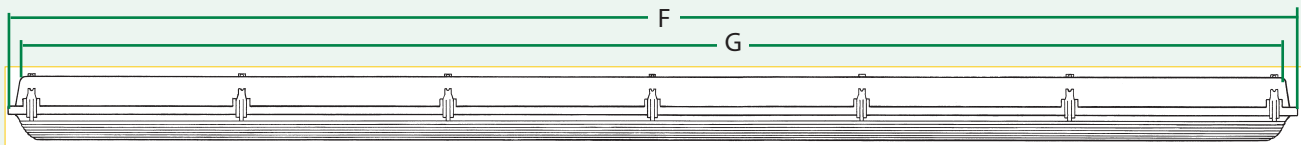
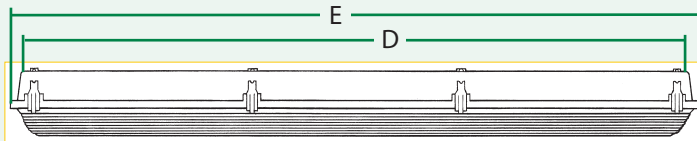
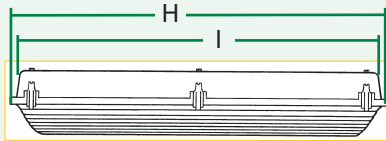
NARROW BODY LINEAR LUMINAIRE — LAMPS PER LUMINAIRE



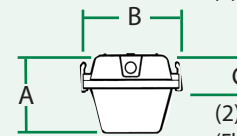
Narrow Body Luminaire

Note: 1. Top down view of 2-foot, 4-foot and 8-foot Narrow Body Luminaire Series Gear Tray.
2. The 8-foot Narrow Body Luminaire will not accommodate T8 LED or T8 Fluorescent 8-foot lamps.

A	B	C	D	E	F	G	H	I
4.25" (1) / 5.75" (2)	6.812"	2.44"	49.7"	51.7"	100"	98.0"	27.7"	25.7"



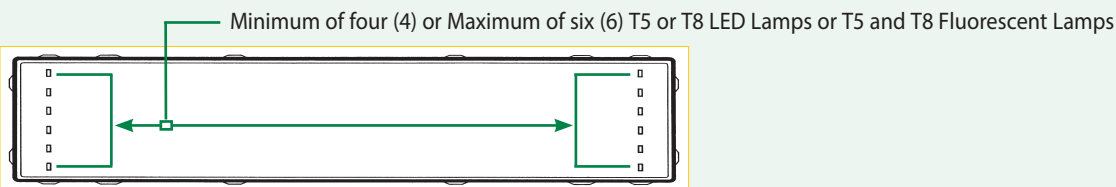
(1) Acrylic Ribbed Diffuser



(2) Acrylic Clear Diffuser (Fluorescent Lamps Only)

Note: Dimensions "E", "F" and "H" reference the 1/2" trade size knockouts on each end of the luminaire.

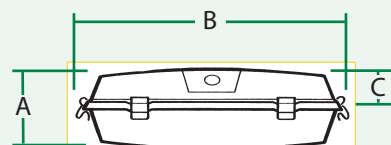
WIDE BODY LINEAR LUMINAIRE — LAMPS PER LUMINAIRE



Wide Body Luminaire

Note: Top down view of 4-foot Wide Body Luminaire Series Gear Tray.

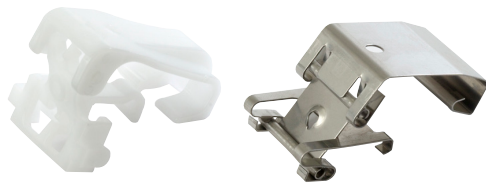
A	B	C	D	E
6.125"	14.6"	3.0"	49.5"	51.5"



Note: Dimension "E" references the 1/2" trade size knockouts on each end of the luminaire.

LUMINAIRE HOUSING LATCH OPTIONS

LED and Fluorescent Linear Luminaires can be ordered with your choice of Acetal (Plastic) or Stainless Steel Latches. Both cam-type latch options accommodate a variety of application environments.



Note: The Wide Body Luminaires are only available with Stainless Steel Latches.

Acetal (Plastic) Latches (Option C) provide an exceptional combination of heat resistance, durability and strength over a wide range of ambient temperatures with minimal attachment of airborne particles.

Stainless Steel Latches (Option S) are ideal for food processing facilities and related applications. These latches can withstand extreme temperatures for refrigerator and freezer applications as well as the chemicals present in car washes. They are also impervious to acidic conditions making them suitable for use in livestock containment buildings.

Tamper Resistant Screws (P/Ns: GFF-TPS-S and GFF-TPS-C) can help the building owner save thousands of dollars in re-lamping cost by protecting the T5 or T8 LED or Fluorescent Lamps installed in our luminaires from tampering, vandalism and theft.

Acetal (Plastic)
Latch
(Option C)



Stainless Steel
Latch
(Option S)



Tamper Resistant
Screws
(P/N GFF-TPS-C)



OCCUPANCY SENSOR

Our Occupancy Sensor (OS) is the energy and cost efficient method to manage illumination systems in applications such as stairwells, warehouses, utility and maintenance buildings, storage areas, tunnels and more.

Installing occupancy sensors can reduce energy consumption up to 45% or more by operating similar to a light switch. The sensor turns the lights on when it senses activity in a room or area, and then turns the light off automatically after sensing no activity after a preset time.

Two Occupancy Sensors are available:

Passive Infrared (PIR) Sensors (Options R1, R2, and R3): Recommended for ceiling heights 15-feet or higher. PIR sensors work as an automatic lighting control in high and medium bay location applications.

Microwave Sensors (Options R4, R5, and R6): Recommended for ceiling heights 15-feet or lower. This microwave sensor type covers a wide range and detects the slightest movement in its occupancy zone. Detection is sensed through doors, glass, or thin walls.

PIR Occupancy
Sensor
(Options R1, R2
and R3)



6-FOOT TWIST LOCK POWER CORD

Built to the NEMA standard, this locking power cord plug is rated for 120V or 277V circuits, has a fully molded low profile ergonomic shape, and is RoHS compliant. The plug body is molded with deeply contoured ridges and a non-slip grip that makes "plug-in" quick and easy.

Twist Lock Power Cord
(Options A1 and A2)



LINEAR LUMINAIRES

LINEAR LUMINAIRE ACCESSORIES AND OPTIONS

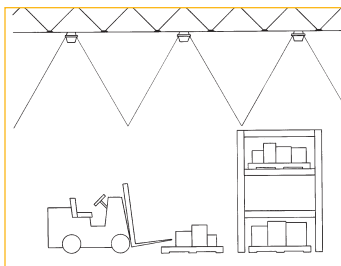
SPECULAR REFLECTORS FOR FLUORESCENT LAMPS

- Specular reflectors for fluorescent lamps can reduce lighting energy costs by as much as 30%.
- Provides additional light into the work space.
- Delivers the highest efficacy at the lowest watts per square foot that enables lamps to perform at maximum efficiency.
- Two (2) Narrow Body reflector styles:
 - **The Basic Reflector (Option B)** concentrates light to specific work areas and provides more uniform illumination.
 - **The Wide Reflector (Option W)** provides a broader dispersion of light at higher and lower mounting levels in warehouses, manufacturing areas, factories, commercial kitchens, and parking garages, as well as outdoor lighting applications.

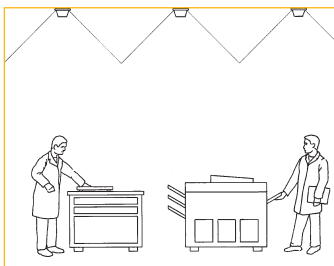
Note: Wide Reflector is available ONLY for 4-foot two (2) lamp and 8-foot four (4) lamp Fluorescent Linear Luminaires.

- Both reflectors provide 95% reflectivity to enhance energy efficiency for more effective lighting.

Wide Body - Specular Reflector
(Option N)



Narrow Body - Basic Specular
Reflector (Option B)



Narrow Body - Wide Specular
Reflector
(Option W)



IMPACT RESISTANT UV STABILIZED DIFFUSERS

- 100% Impact Resistant Acrylic Diffusers.
- No tools or fasteners are required to attach the Diffuser to the luminaire housing.

Acrylic Clear Ribbed Diffuser is standard on all Narrow Body Fluorescent Luminaires. The Basic Specular Reflector can be used with this Diffuser.

Acrylic Clear Tall Diffuser (Option Q) is intended for all Narrow Body Fluorescent Luminaires using the Basic and Wide Specular Reflectors.

Acrylic Clear Diffuser is standard on all Wide Body Luminaires.

Ribbed Frosted Diffuser is standard on all LED strips and T5 or T8 LED Lamp Narrow Body Luminaires and **(Option P)** on all Fluorescent Narrow Body Luminaires.

Note: Each end of the Narrow Body Acrylic Clear Tall Diffuser and the Wide Body Clear Diffuser are frosted to minimize untargeted light dispersion.

Acrylic Clear
Ribbed Diffuser



Narrow Body
Acrylic Clear
Tall Diffuser
(Option Q)



Wide Body
Acrylic Clear
Diffuser



Ribbed
Frosted
Diffuser

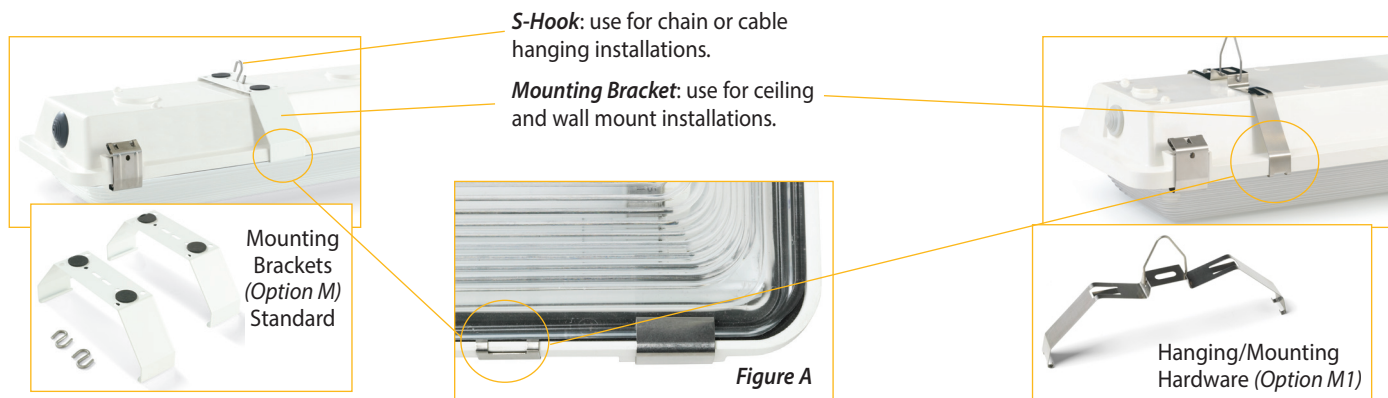


LUMINAIRE MOUNTING HARDWARE

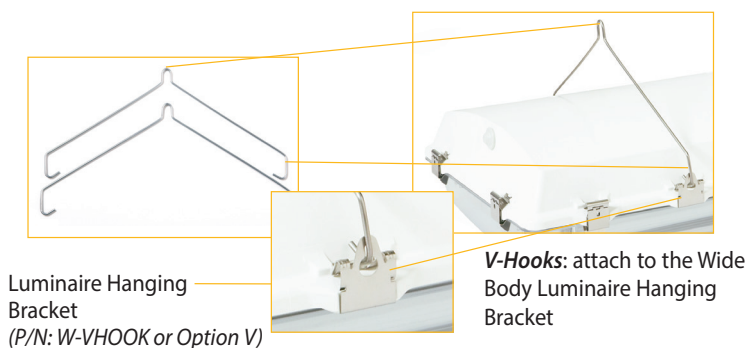
Luminaire Mounting Hardware eliminates drilling through the luminaire housing to maintain the IP66/IP67 "wet" location ingress protection rating. We recommend using the Narrow Body Luminaire Mounting Hardware when installing a 2-foot, 4-foot or 8-foot luminaire and the V-Hooks when installing a 4-foot Wide Body Luminaire. Any luminaire that has been incorrectly installed by drilling, puncturing, piercing or any other means that alters the integrity of the luminaire housing will void the warranty!

Note: For food processing and food service applications, we strongly recommend using our stainless steel mounting brackets versus our standard mounting brackets. The two (2) neoprene spacers on the standard mounting brackets will deteriorate over time especially when pressure washers are used to clean these facilities.

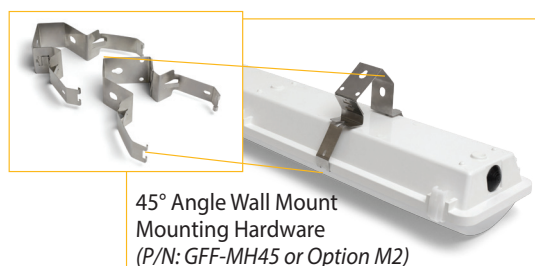
The Narrow Body Luminaire Mounting Hardware includes two (2) "snap-on" mounting brackets that attach to the outside edge of the luminaire housing. P/N GFF-MH (Option M) is standard with all Narrow Body luminaires. It comes with a powder coated finish and is suitable for ceiling or wall mount applications but can also be used with chain or cable mounting applications when using the S-Hooks. P/N GFF-MHS (Option M1) comes with a stainless steel finish.



The Wide Body Luminaire Hanging Hardware (P/N: W-VHOOK or Option V) uses two (2) V-Hooks that are used for chain or cable mounting applications to expedite luminaire installation.



The 45° Angle Wall Mount Stainless Steel Mounting Hardware (P/N: GFF-MH45 or Option M2) includes two (2) "snap-on" mounting brackets that attach to the outside edge of the luminaire housing (see Figure A). Comes with a stainless steel finish and mounts at a 45° angle.



LUMINAIRE SUSPENSION SYSTEM KIT

The Suspension Kit (P/N: GFF-FSSK) provides instant and "tool-less" infinite height adjustment when installing our luminaires. Kits are maintenance-free and require no ongoing adjustments.

- Easily suspends luminaires, signage, mechanical, HVAC systems, and other objects that require suspension from beams, trusses, or joists.
- Eliminates the need for chain, S-Hooks, threaded rods and strut support nuts.
- Suspension Cable Length: 100-inches with two (2) 20-inch Y-cables and two (2) swaged spring-loaded steel hooks with bright nickel plating on Y-cable ends with fuse cut cable to prevent fraying.
- Safe Working Load: 75 lbs. (34 kg.); Minimal breaking strength: 420 lbs. (190.5 kg.)
- Maximum load rating for one (1) cable: 62 lbs. (28.1 kg.); two (2) cables: 124 lbs. (56.2 kg.)
- One (1) kit includes: Two (2) 1/16" (1.587 mm) x 10-foot galvanized steel cables with two (2) attached spring-loaded steel hooks and two (2) tool-less suspension cable adjustment blocks. Steel Hook Inside Diameter: 0.5 inches.



LINEAR LUMINAIRES

LINEAR LUMINAIRE ACCESSORIES AND OPTIONS

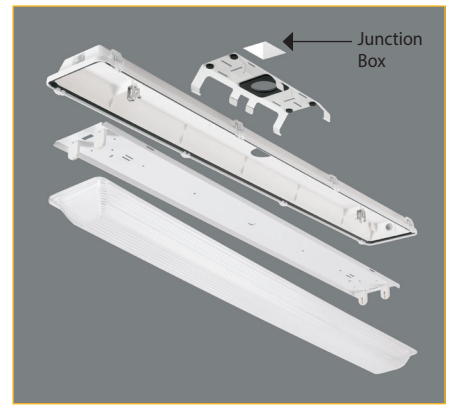
SURFACE MOUNT BRACKET — “Y” OPTION

The Surface Mount Bracket (SMB) provides the contractor with the ability to locate and install a 2-foot, 4-foot or 8-foot Fluorescent or LED Narrow Body Luminaire directly under or over a junction box to surface mount the luminaire to a ceiling or wall.

- Eliminates the cost and installation of a fixture whip and junction box cover plate.
- Reduces installation time and lowers labor cost.
- Provides a water and bug resistant seal that protects the critical area between the junction box's supply conductors and the luminaire. No adhesive sealant or gasket material is required.
- The finished installation of the luminaire is more pleasing to the building owner without a fixture whip running across the ceiling.
- The SMB in combination with the Narrow Body Luminaire maintains its UL Listing for “wet” location applications.
- Eight (8) slotted holes simplify and expedite installation.
- Compliant with the 2017 National Electrical Code: Article 410.24(B).

Note: The Surface Mount Bracket is a “factory installed” option and IS NOT available for Sale as an Accessory or for field retrofit.

We will pre-drill a hole in the Narrow Body Luminaire housing at the designated “number” location shown in the following diagrams to facilitate pulling the supply conductors from the junction box and into the luminaire.



SURFACE MOUNT BRACKET: 2-FT NARROW BODY LINEAR LUMINAIRE



Option — Y
Large Bracket

SURFACE MOUNT BRACKET: 4-FT NARROW BODY LINEAR LUMINAIRE



Option — Y1
Large and Small Bracket



Option — Y2
Large Bracket

SURFACE MOUNT BRACKET: 8-FT NARROW BODY LINEAR LUMINAIRE



Option — Y1
Large and Small Bracket



Option — Y2
Large and Small Bracket



Option — Y3
Large and Small Bracket (2)

LINEAR LUMINAIRE ACCESSORY PART NUMBERS

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Narrow Body Linear Luminaire Accessories										
GFF-DC4	14251	Replacement Clear Acrylic Diffuser (Tall): for 4-FT Narrow Body Fluorescent Linear Luminaires	EA	1	BX	5	5	5	Yes	10
GFF-DC8	14252	Replacement Clear Acrylic Diffuser (Tall): for 8-FT Narrow Body Fluorescent Linear Luminaires	EA	1	BX	5	5	5	Yes	21
GFF-DF2	14452	Replacement Frosted Acrylic Diffuser: for 2-FT Narrow Body LED Linear Luminaires	EA	1	BX	5	5	5	Yes	5
GFF-DF4	14453	Replacement Frosted Acrylic Diffuser: for 4-FT Narrow Body LED Linear Luminaires	EA	1	BX	5	5	5	Yes	10
GFF-DF8	14454	Replacement Frosted Acrylic Diffuser: for 8-FT Narrow Body LED Linear Luminaires	EA	1	BX	5	5	5	Yes	21
GFF-DR2	14334	Replacement Ribbed Acrylic Diffuser: for 2-FT Narrow Body Fluorescent Linear Luminaires	EA	1	BX	5	5	5	Yes	5
GFF-DR4	14253	Replacement Ribbed Acrylic Diffuser: for 4-FT Narrow Body Fluorescent Linear Luminaires	EA	1	BX	5	5	5	Yes	10
GFF-DR8	14254	Replacement Ribbed Acrylic Diffuser: for 8-FT Narrow Body Fluorescent Linear Luminaires	EA	1	BX	5	5	5	Yes	21
GFF-FSSK	14256	Luminaire Suspension System Kit	BG	2	BG	12	12	12	Yes	5
GFF-L2C	14336	Replacement Acetal (Plastic) Latches: for 2-FT Narrow Body Linear Luminaires	BG	6	BG	0	0	6	Yes	1
GFF-L2SS	14337	Replacement Stainless Steel Latches: for 2-FT Narrow Body Linear Luminaires	BG	6	BG	0	0	6	Yes	1
GFF-L4C	14240	Replacement Acetal (Plastic) Latches: for 4-FT Narrow Body Linear Luminaires	BG	8	BG	0	0	8	Yes	1
GFF-L4SS	14239	Replacement Stainless Steel Latches: for 4-FT Narrow Body Linear Luminaires	BG	8	BG	0	0	8	Yes	1
GFF-L8C	14250	Replacement Acetal (Plastic) Latches: for 8-FT Narrow Body Linear Luminaires	BG	14	BG	0	0	14	Yes	1
GFF-L8SS	14249	Replacement Stainless Steel Latches: for 8-FT Narrow Body Linear Luminaires	BG	14	BG	0	0	14	Yes	1
GFF-MH	14241	White Powder Coated Luminaire Mounting Hardware: for Ceiling and Wall Mount Applications	BG	2	BG	0	0	2	Yes	1
GFF-MHS	14352	Stainless Steel Luminaire Mounting Hardware: for Ceiling and Wall Mount Applications	BG	2	BG	0	0	2	Yes	1
GFF-MH45	50005	45° Angle Stainless Steel Luminaire Mounting Hardware: for Wall Mount Applications	BG	2	BG	0	0	2	Yes	1
GFF-TPS-C	14248	Tamper Resistant Stainless Steel Screws: for Acetal (Plastic) Latches	BG	100	BG	0	0	100	Yes	1
GFF-TPS-S	14245	Tamper Resistant Stainless Steel Screws: for Stainless Steel Latches	BG	100	BG	0	0	100	Yes	1
Wide Body Linear Luminaire Accessories										
GFF-FSSK	14256	Luminaire Suspension Kit	BG	2	BG	12	12	12	Yes	5
GFF-TPS-S	14245	Tamper Resistant Stainless Steel Screws: for Stainless Steel Latches	BG	100	BG	0	0	1	Yes	1
W-DC4	14238	Replacement Clear Acrylic Diffuser: for 4-FT Wide Body Fluorescent Linear Luminaires	EA	1	BX	5	5	5	Yes	27
W-DF4	50004	Replacement Frosted Acrylic Diffuser: for 4-FT Wide Body LED Linear Luminaires	EA	1	BX	5	5	5	Yes	27
W-L4SS	50003	Replacement Stainless Steel Latches: for 4-FT Wide Body Linear Luminaires	BG	8	BG	0	0	8	Yes	1
W-VH00K	50002	Luminaire Hanging Hardware: for 4-FT Wide Body Linear Luminaires	BG	2	BG	0	0	2	Yes	2

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

LIGHTING ACCESSORIES

DUCT SEAL, TIE WIRE AND FIXTURE HANGERS

DUCT SEAL COMPOUND

Our UL Listed Duct Seal Compound is used to seal around junction boxes, flashings, service mast and cable entries. Duct Seal Compound is available in individual 1 lb. bricks, five (5) 1 lb. bricks in one (1) package, or a 5 lb. brick. Each Duct Seal package is individually wrapped in release paper to simplify handling and repackaging.

- Asbestos-free compound
- Odorless, non-sticky formula.
- Can be painted immediately.
- Temperature tolerance: -40°F (-40°C) to 180°F (82°C).
- Excellent adhesive properties for use on wood, glass, aluminum and steel.
- Meets the requirements of the 2017 National Electrical Code: Articles 230.8 and 300.5(D)(2).

Note: None of the components of this product are hazardous as defined by OSHA Hazard Communication Standard (29 CFR 1910.1200).

For more information, visit our website at engproducts.com/Resources to view the Duct Seal MSDS Sheet.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
EPD1	10101	Duct Seal: 1 Lb. Slug	LB	1	BX	50	50	1	No	1
EPD5	10102	Duct Seal: Package of Five (5) 1 Lb. Slugs	LB	5	BX	10	10	5	Yes	5
EPD5B	10105	Duct Seal: 5 Lb. Brick	LB	5	BX	10	10	5	No	5



EPCO Duct Seal Compound is Made in the USA.

Complies with the American Recovery and Reinvestment Act – Buy American Provision.

TIE WIRE

Supports a variety of uses on the job site including bundling, supporting and hanging cable conduit and suspended luminaires. Available in 16 AWG Black Annealed or Galvanized rolls. Also available in 18 AWG Galvanized 30" pre-cut lengths.

Tie Wire: 18 AWG Galvanized Straight Wire

Carbon: C1008 Soft Annealed

Yield: LB/FT = .0104 (104 FT/LB)

Size: .047" Diameter (plus/minus .001")

Tensile/Breaking Strength: 75 lb. max. PSI; 105-135 lbs.

ASTM: Zinc Coating; Meets A641 that requires no minimum ounces of zinc per square foot of surface area.

Federal Specification: QQ-W-461

Tie Wire: 16 AWG Black

and Galvanized Coiled Wire

Carbon: C1008 Soft Annealed

Yield: LB/FT = .0104 (104 FT/LB)

Size: .0625" Diameter (plus/minus .001")

Tensile/Breaking Strength: 45-60,000 PSI

ASTM: Zinc Coating; Meets A641 that requires no minimum ounces of zinc per square foot of surface area.

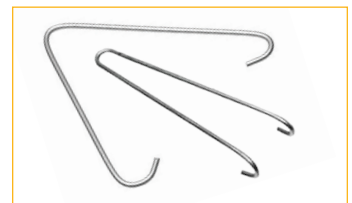
Federal Specification: QQ-W-461



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
TY16	10150	16 AWG Black Tie Wire: 350-FT per Roll	EA	1	BX	20	20	20	Yes	70
TY16G	10152	16 AWG Galvanized Tie Wire: 350-FT per Roll	EA	1	BX	20	20	20	Yes	70
TY18G	10151	18 AWG Galvanized Tie Wire: 30" Length	EA	1	BX	1750	1750	1750	Yes	25
TY18G-50B	12000	18 AWG Galvanized Tie Wire: 30" Length, 50 per Bundle	EA	1	BX	35	35	1	No	25

LUMINAIRE HANGERS

These labor saving Luminaire Hangers are available in Side Mount or Top Mount styles and can be used with our Chain and S-Hook products. Top Mount Hangers are used when the mounting holes are located on top of a troffer type luminaire. Side Mount Hangers are used when the mounting holes are located on the side of a troffer type luminaire. Both Luminaire Hanger styles are plated for durability and precisely bent to simplify installation and ensure a secure fit.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
SMH	10726	11 AWG Plated Luminaire Hangers: Side Mount	BX	100	BX	100	100	100	Yes	5
TMH	10725	10 AWG Plated Luminaire Hangers: Top Mount	BX	100	BX	100	100	100	Yes	7



EPCO Luminaire Hangers are Made in the USA.

Complies with the American Recovery and Reinvestment Act – Buy American Provision.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

SINGLE LOOP JACK CHAIN

Single Loop Jack Chain is used to support suspended luminaires and is often required by code in many cities. We package the chain in convenient 50 and 100-foot boxes.


Single Loop Jack Chain



SINGLE LOOP JACK CHAIN LOAD LIMITS

Trade Size	Wire Gauge	Wire Diameter Inches	Length Per 100 Link Inches	Weight Per 100 Feet Pounds	Working Load Limit Pounds	Break Test Load Pounds
12	13	.105	75	8.5	29 Lbs	115 Lbs
10	12	.135	95	14.7	43 Lbs	170 Lbs

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
JC10B/100B	10201	10 AWG Bright Jack Chain: 100-FT per Carton	FT	100	BX	5	500	100	Yes	80
JC12B/100	11703	12 AWG Bright Jack Chain: 100-FT Spool	FT	100	BX	5	500	100	Yes	45
JC12B/100B	10203	12 AWG Bright Jack Chain: 100-FT per Carton	FT	100	BX	5	500	100	Yes	45

 EPCO Single Loop Jack Chain is Made in the USA.
Complies with the American Recovery and Reinvestment Act – Buy American Provision.

S-HOOKS

S-Hooks are used with Jack Chain to support suspended luminaires. All S-Hooks are plated for lasting durability. Two (2) sizes are available ranging from 1.125" length 12 AWG wire to 1.25" length 10 AWG wire.



S-HOOK LOAD LIMITS

Trade Size	Wire Gauge	Wire Diameter Inches	Length	Working Load Limit Pounds	Minimum Strength
SH10	10	.135	1.25"	48 Lbs	190 Lbs
SH12	12	.105	1.125"	32 Lbs	97 Lbs

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
SH10	10251	10 AWG Plated S-Hooks: 1.25" Length	BG	100	BG	10	1000	100	Yes	11
SH12	10252	12 AWG Plated S-Hooks: 1.125" Length	BG	100	BG	10	1000	100	Yes	10

 EPCO S-Hooks are Made in the USA.
Complies with the American Recovery and Reinvestment Act – Buy American Provision.

RETROFIT LIGHTING

EPCO's RetroFit Conversion Kits are recognized as the most cost-effective, energy efficient, and labor savings products for lighting system upgrades. Our Kits are made in the USA, comply with the American Recovery and Reinvestment Act (ARRA), and allow contractors to participate in Government sponsored lighting retrofit programs.

LED RETROFIT CONVERSION KITS FOR STRIP-TYPE FIXTURES

LED RetroFit Conversion Kits convert older 4-foot or 8-foot T8 or T12 "strip-type" fixtures into energy efficient LED luminaires. Each LED RetroFit Conversion Kit includes a Frosted Ribbed Acrylic Diffuser and LED gear tray.

FIXTURE BRACKET RETROFIT CONVERSION KITS FOR STRIP-TYPE FIXTURES

"Fixture Bracket" RetroFit Conversion Kits convert older 4-foot or 8-foot T8 or T12 "strip-type" fixtures using magnetic ballast into energy efficient T5 or T8 luminaires. Each retrofit kit includes bi-pin lamp sockets, fixture bracket socket plates, and self-tapping screws.

WIRING HARNESS RETROFIT CONVERSION KITS FOR STRIP-TYPE OR TROFFER FIXTURES

Wiring Harness RetroFit Conversion Kits are the low cost solution to upgrade "strip-type" or troffer light fixtures currently using traditional T8 or T12 fluorescent lamps. Custom engineered and pre-fitted, our wiring harness kits convert these older light fixtures into energy efficient luminaires using T5 or T8 LED Lamps that lower your lighting systems energy consumption 30 - 40%.

LED RETROFIT CONVERSION KITS FOR VAPOR TIGHT LUMINAIRES

Our LED RetroFit Conversion Kits for Vapor Tight Luminaires provide a simple and fast upgrade from T5 or T8 Fluorescent Lamps to an energy efficient LED Strip and Driver Luminaire. Each Kit includes a Frosted Ribbed Acrylic Diffuser.

CONTRACTOR BENEFITS

- Lighting system retrofit opportunities and available rebates from local utilities and co-ops are available for commercial, industrial, and institutional buildings that have not converted to the energy efficient LED Strips, T5 or T8 LED Lamps, or T5 or T8 fluorescent lamps.
- Labor savings! The combination of high efficiency LED driver or electronic ballast with T5 or T8 lamps, and the low cost of our RetroFit Conversion Kits is a fast and easy installation.
- The original luminaire housing is reused. This reduces the retrofit conversion time significantly to half the cost and half the installation time compared to installing a new luminaire.
- Requires minimal rewiring.
- Minimal recycling on the job site.

LED RETROFIT CONVERSION KITS FOR STRIP-TYPE FIXTURES

Our LED RetroFit Conversion Kits come with a complete Gear Tray Assembly to convert older 4-foot and 8-foot T8 or T12 “strip-type” fixtures into energy efficient LED luminaires.

- High quality components and attractive design makes the retrofit look like a new LED luminaire at a fraction of the cost.
- Improves the quality, integrity, and sustainability of your lighting system.
- A complete LED lighting upgrade solution reduces energy consumption and improves energy management.
- Delivers high performance lumen output; no need to purchase a new LED luminaire.
- Provides the contractor with ultimate “installation” flexibility.
- The retrofit is fast and easy regardless of “strip-type” fixture brand.

BENEFITS

- ETL Listed to UL Standard 1598C.
- DLC Listed and approved (standard wattage driver only).
- Reduced energy consumption compared to older fluorescent lighting systems.
- High system efficacy.
- 100% Tested and certified before shipping ensures out of the box performance.
- Assembled in the United States.
- Five (5) Year Warranty. 50,000 hours, minimum at L_{70} .
- Minimal part numbers. Other companies require separate part numbers for various “strip-type” fixture housing widths.

FEATURES

- One-piece construction, compact design, fast and trouble free installation.
- Integral “adjustable” installation brackets accommodate 4.25” (107.95mm) or 5.0” (127mm) “strip-type” fixture housing widths.
- Multi-Voltage Operation — 120/277V input.
- Available in 4000K and 5000K color temperatures.
- Available in two (2) or three (3) T8 fluorescent lamp equivalents.
- Kits are available with or without the frosted diffuser to meet your application needs.
- Pre-wired at the factory for 0-10V dimming.
- Color Rendering Index (CRI): 80+



**LED RETROFIT CONVERSION KIT
(STRIP LED OR T5 OR T8 LED)**

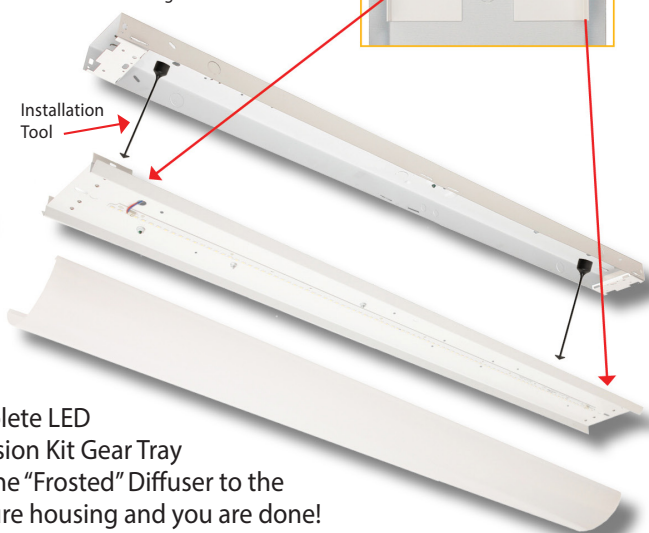
TYPICAL APPLICATIONS:

- Commercial Facilities
- Industrial Facilities
- Storage Rooms
- Warehouses
- Retail Stores
- And more...

**RETROFITTING WITH THE LED RETROFIT CONVERSION KIT (COMPLETE GEAR TRAY ASSEMBLY)****BEFORE**

Remove and recycle the fluorescent lamps, ballast cover, lamp holders and ballast from the “strip-type” fixture housing.

Integral “adjustable” installation brackets, on each end of the gear tray, accommodate 4.25” (107.95mm) or 5.0” (127mm) “strip-type” fixture housing widths. Other companies have separate part numbers for different housing widths.

**AFTER**

Install the complete LED RetroFit Conversion Kit Gear Tray Assembly and the “Frosted” Diffuser to the “strip-type” fixture housing and you are done!

LED DRIVER SPECIFICATIONS		
Electrical Specifications	Standard Wattage*	High Wattage
Input Voltage	120 - 277 VAC	120 - 277 VAC
Input Frequency	60/50 Hz	60/50 Hz
Power Factor	> 0.9 @ Full Load; 120 through 277V	> 0.9 @ Full Load; 120 through 277V
Inrush Current	20 Amps @ 230 Volts	10.3 Amps @ 120 Volts; 17.5 Amps @ 277 Volts
Output Power	35-Watts	55-Watts
Total Harmonic Distortion	20% or less	20% or less
Protection	Overvoltage, Over Current and Short Circuit	Overvoltage, Over Current and Short Circuit
Dimming Capability	10% of Total Output Power; 0 through 10V	10% of Total Output Power; 0 through 10V
Environmental Specifications		
Operating Temperature	-4°F (-20°C) to 122°F (50°C)	-4°F (-20°C) to 122°F (50°C)
Applications	Damp and Dry Locations	Damp and Dry Locations
Certifications		
Underwriters Laboratories (UL)	UL 8750	UL 8750
FCC Part 15	Class B Consumer Limits	Class A Non-Consumer Limits

*DLC Listed and Approved.

ACCESSORIES/OPTIONS

LED RetroFit Installation Tool: The LED RetroFit Installation Tool Kit includes two (2) "labor and time saving" magnetic suspension devices to expedite installation of the gear tray assembly. Supports one man installation when installing 8-foot fixtures.

The "round" magnetic end of the tool is attached to the outer ends of the strip fixture housing. The "arrowed" end of the tool is inserted through the slotted holes on each end of the retrofit gear tray, then rotated 90 degrees to hold the gear tray in place while the contractor completes termination of the supply wires to the gear tray.

100% reusable for multiple installation projects, the tool eliminates the use of string, tie wire, nylon straps, or other temporary suspension methods.

Diffuser: The one-piece, "snap-on" polycarbonate UV stabilized frosted diffuser features 2.25" (57.15mm) high contoured shape design that provides even lumen distribution without glare, shadows, or hot spots. Includes two (2) end caps with screws.

- The edges of the diffuser in conjunction with the end caps assure a solid attachment to the luminaire's housing with no light leakage.
- The diffuser is easily removable for maintenance or cleaning.

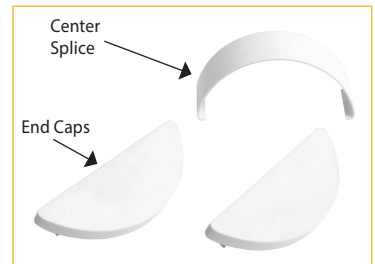
Note: The 8-Foot Diffuser includes two (2) 4-Foot Diffusers, two (2) end caps and a center splice that connects the two (2) Diffusers for a complete installation.



LED RetroFit
Installation Tool

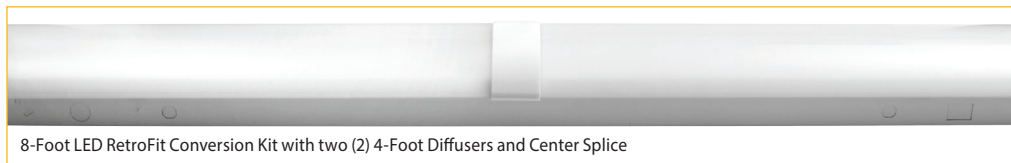


Snap-On Diffuser



Center
Splice

End Caps



8-Foot LED RetroFit Conversion Kit with two (2) 4-Foot Diffusers and Center Splice

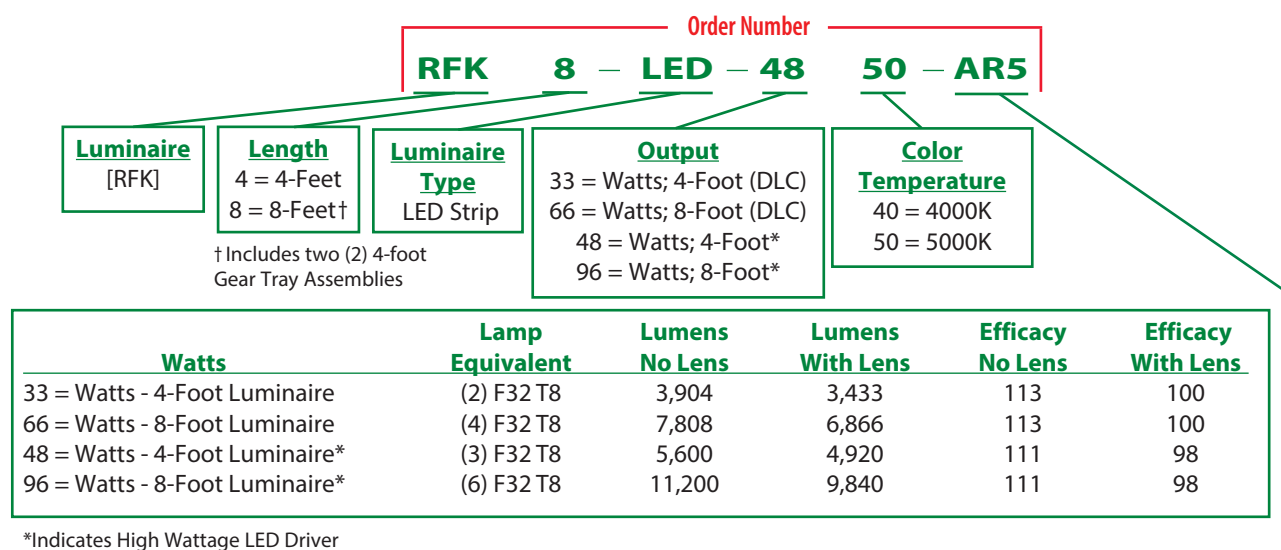
Emergency LED Backup Driver: Meets life safety code requirements for Emergency Illumination; provides 90 minutes of emergency egress lighting.

ACCESSORIES/OPTIONS (CONTINUED)

Energy Saving Occupancy Sensors: Utilizing occupancy sensors provides automatic energy savings up to 70%. EPCO microwave occupancy sensors are suitable for low occupancy applications, including parking garage egress areas, building stairwells, warehouses and storage facilities.

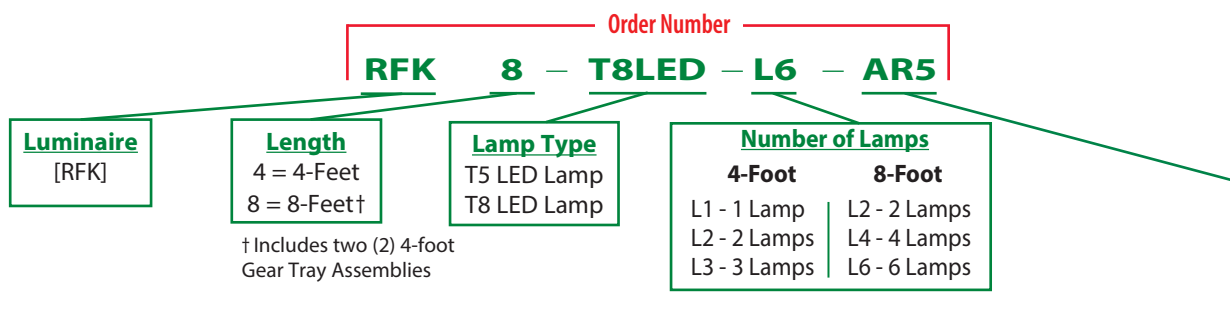
- Designed for 15-foot ceilings or lower.
- Provides bi-level lighting automatically (see the Microwave Occupancy Options in the table shown below).
- Reduces lighting energy costs 50% or more with low-level illumination when room spaces are not occupied.
- Automatically switches to full illumination when the sensor detects motion.
- Adjustable time delay and daylight harvesting capability. The frosted diffuser is easily removable to provide convenient access to the sensor for adjustment.

LED RETROFIT CONVERSION KIT CONFIGURATION EXAMPLE — LED STRIP



LED RETROFIT CONVERSION KIT CONFIGURATION EXAMPLE — T5 AND T8 LED LAMPS

Note: We recommend using only Type B Single-End Powered Bi-Pin T5 or T8 LED Lamps.



LED RetroFit Conversion Kit Options

The LED RetroFit Conversion Kit Luminaire can be built to your specifications by adding the respective option codes as "part" of your order number.

Option	Notes
A. 4-Foot Frosted Diffuser with End Caps	The "Frosted Diffuser" is an option for all LED RetroFit Conversion Kits and is strongly recommended for ceiling heights less than 15-feet. Two (2) "End Caps" are included with the Diffuser.
E. Emergency LED Backup Driver	Non-stock; long lead time.
FH4. 4-Foot Fixture Housing	
FH8. 8-Foot Fixture Housing	
R4. Microwave Occupancy Sensor (On/Off Only)	Recommended for ceiling heights 15-feet or lower. The microwave sensor detects the slightest movement in the occupancy zone. Detection is sensed through doors, glass, or thin walls.
R5. Microwave Occupancy Sensor (0-10V Dimming 30%)	
R6. Microwave Occupancy Sensor (0-10V Dimming 50%)(See Page 11)	
Z. Bulk Packaging	25 or 50 per skid (eliminates individual carton packaging on the job site)

LED RETROFIT CONVERSION KIT PART NUMBERS

Catalog Number	UPC Number	Description	Order Unit	Order Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
LED RetroFit Conversion Kits LED Strip										
RFK4-LED-3340	14036	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 33-Watts 4000K, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	9
RFK4-LED-3340-A	14037	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 33-Watts 4000K, Adjustable Width: 4.25" to 5"; Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	11
RFK4-LED-3350	14034	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 33-Watts 5000K, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	9
RFK4-LED-3350-A	14035	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 33-Watts 5000K, Adjustable Width: 4.25" to 5"; Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	11
RFK4-LED-4840	14006	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 48-Watts 4000K, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	9
RFK4-LED-4840-A	14007	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 48-Watts 4000K, Adjustable Width: 4.25" to 5"; Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	11
RFK4-LED-4850	14004	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 48-Watts 5000K, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	9
RFK4-LED-4850-A	14005	LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, 48-Watts 5000K, Adjustable Width: 4.25" to 5"; Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	11
RFK8-LED-6640	14030	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 66-Watts 4000K, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	18
RFK8-LED-6640-A	14031	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 66-Watts 4000K, Adjustable Width: 4.25" to 5"; Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	21
RFK8-LED-6650	14032	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 66-Watts 5000K, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	18
RFK8-LED-6650-A	14033	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 66-Watts 5000K, Adjustable Width: 4.25" to 5"; Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	21
RFK8-LED-9640	14028	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 96-Watts 4000K, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	18
RFK8-LED-9640-A	14029	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 96-Watts 4000K, Adjustable Width: 4.25" to 5"; Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	21
RFK8-LED-9650	14014	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 96-Watts 5000K, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	18
RFK8-LED-9650-A	14015	LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, 96-Watts 5000K, Adjustable Width: 4.25" to 5"; Includes Snap On Frosted Diffuser	EA	1	BX	1	1	1	No	21
LED RetroFit Conversion Kits Using T8 LED Lamps										
RFK4-T8LED-L1*	14008	T8 LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, one (1) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	7
RFK4-T8LED-L2*	14010	T8 LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, two (2) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	7
RFK4-T8LED-L3*	14009	T8 LED RetroFit Conversion Kit: for 4-FT Strip Fixture Housing, three (3) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	7
RFK8-T8LED-L2*	14012	T8 LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, two (2) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	13
RFK8-T8LED-L4*	14011	T8 LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, four (4) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	13
RFK8-T8LED-L6*	14013	T8 LED RetroFit Conversion Kit: for 8-FT Strip Fixture Housing, six (6) Lamp, Adjustable Width: 4.25" to 5"	EA	1	BX	1	1	1	No	13
Note: Also available for T5 LED Lamps. Contact our Inside Sales Department (sales@engproducts.com or 800.336.1976).										
LED RetroFit Conversion Kit Accessories/Options										
RFK-TOOL	14019	LED RetroFit Conversion Kit Installation Tool	EA	1	BG	2	2	2	Yes	1
RFK4-LENS	14039	Replacement Frosted Acrylic Diffuser: for 4-FT Strip Fixture	EA	1	BX	1	1	1	Yes	2
RFK8-LENS	14038	Replacement Frosted Acrylic Diffuser: for 8-FT Strip Fixture; Includes two (2) 4-FT Diffusers jointed together by two (2) Tinnerman Clips	EA	1	BX	1	1	1	Yes	3

***Note:** We recommend using only Type B Single-End Powered Bi-Pin T5 or T8 LED Lamps.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

PHOTOMETRICS FOR LED RETROFIT CONVERSION KITS

LED RetroFit Conversion Kit — LED Strip without Frosted Diffuser

CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	1329	1329	1329	1329	1329	126
5	1325	1325	1326	1326	1325	363
15	1289	1282	1289	1289	1285	556
25	1213	1199	1208	1209	1202	679
35	1094	1081	1088	1084	1079	713
45	937	928	930	918	912	651
55	742	735	730	721	716	496
65	512	509	503	495	493	276
75	265	262	260	260	260	44
85	50	56	4	5	5	0
90	0	1	0	0	0	0
95	0	0	0	0	0	0
105	0	0	0	0	0	0
115	0	0	0	0	0	0
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	1045	26.8
0- 40	1724	44.2
0- 60	3088	79.1
0- 90	3904	100.0
90-120	0	0.0
90-130	0	0.0
90-150	0	0.0
90-180	0	0.0
0-180	3904	100.0

EFFICACY = 113.8 lm/W

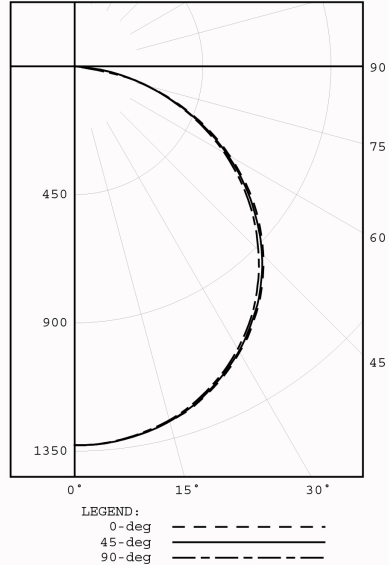
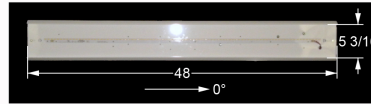
CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 1.29 1.28

BEAM ANGLE (50%) : 116.8 X 114.7 DEGREES

FIELD ANGLE (10%) : 161.5 X 158.5 DEGREES



Luminaire Quality Metrics

LM-79 Report

EPCO's LM-79 Report captures the LED RetroFit Conversion Kit's overall electrical characteristics and photometric measurements (lumen output) performance. This report is a snapshot of spatial distribution of light and color attributes under specified operating conditions. This report does not address lifetime ratings for the LED RetroFit Conversion Kit, or changing performance over time (e.g., lumen maintenance).

Most important, EPCO's LM-79 data is intended to provide you with objective retrofit product evaluation comparisons relative to the LED RetroFit Conversion Kit's performance requirements.

LM-80 and TM-21 Reports available upon request!

LED RetroFit Conversion Kit — LED Strip with Frosted Diffuser

CANDELA DISTRIBUTION						FLUX
	0.0	22.5	45.0	67.5	90.0	
0	1084	1084	1084	1084	1084	103
5	1080	1080	1080	1080	1080	294
15	1040	1035	1044	1048	1047	444
25	953	947	967	977	978	534
35	829	830	855	874	880	555
45	681	688	722	749	758	509
55	517	529	570	608	622	410
65	345	364	416	463	480	282
75	173	208	273	326	344	161
85	31	84	158	210	229	81
90	0	44	113	163	181	38
95	0	21	78	123	140	15
105	0	4	33	65	78	5
115	0	0	11	29	37	1
125	0	0	3	10	14	0
135	0	0	1	2	4	0
145	0	0	0	0	1	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	841	24.5
0- 40	1375	40.1
0- 60	2439	71.0
0- 90	3292	95.9
90-120	135	3.9
90-130	139	4.1
90-150	141	4.1
90-180	141	4.1
0-180	3433	100.0

EFFICACY = 100.1 lm/W

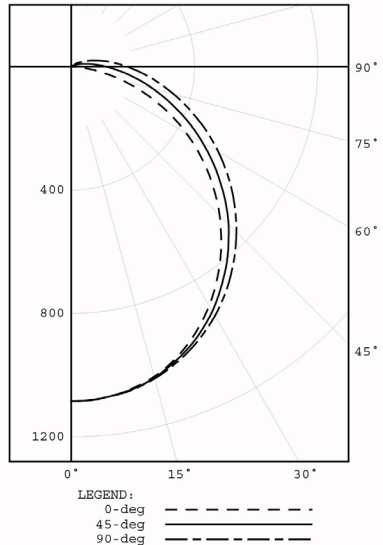
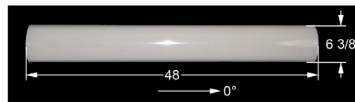
CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG

SPACING CRITERIA : 1.23 1.28

BEAM ANGLE (50%) : 107.0 X 121.3 DEGREES

FIELD ANGLE (10%) : 158.1 X 199.3 DEGREES



RETROFIT LIGHTING

LED RETROFIT KITS FOR VAPOR TIGHT LUMINAIRES

LED RETROFIT CONVERSION KITS FOR VAPOR TIGHT LUMINAIRES

LED RetroFit Conversion Kits for Vapor Tight Luminares feature a single row of LEDs mounted to a gear tray.

These kits can easily be field installed by a qualified electrician and include:

- High efficacy, long-life LED circuit board mounted directly to the gear tray for maximum thermal dissipation.
- Modular wiring to simplify and expedite supply line connections to the existing lighting system.
- LED Driver includes:
 - Auto-compensate feature to ensure “fail safe” operation.
 - Inputs for dimmable lighting control.
- Frosted Ribbed Acrylic Diffuser mitigates glare and provides color-rendering index of 81 and above.



LED RETROFIT KIT FOR VAPOR TIGHT LUMINAIRES



6 Latches



8 Latches

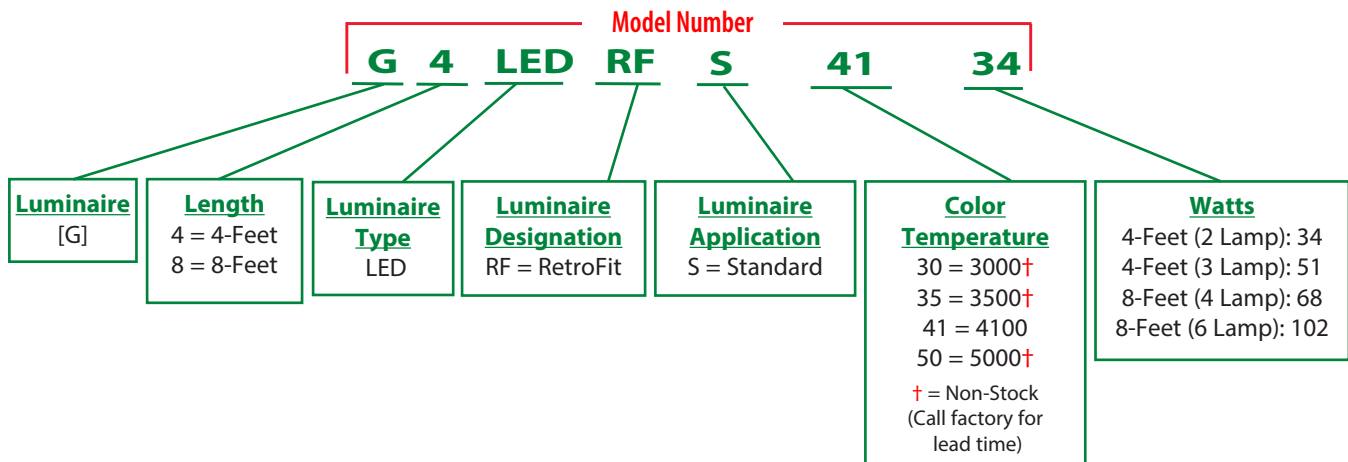
Note: If the luminaire housing you want to retrofit has six (6) latches (4-foot) or twelve (12) latches (8-foot) total, EPCO's LED RetroFit Kit will not fit! Contact our Inside Sales Department (800.336.1976 or sales@engproducts.com) for more information.

SPECIFICATIONS

Environmental	Suitable for indoor, outdoor, and wet locations
Ambient Operating Temperature	<ul style="list-style-type: none"> • -20°F to 122°F (-30°C to 50°C) Suitable for elevated ambient temperatures • 0°F to 113°F (-17°C to 45°C) Battery Backup Option
Operating Voltage	120V - 277 @ 50/60 Hz
Power Factor	.9 or Higher
Total Harmonic Distortion	Less than 20%
LED Driver Efficiency	83% (typical) @ 120VAC — Full Load 83% (typical) @ 220VAC — Full Load
Ingress Protection Rating	IP65, IP66, IP67 / NEMA 4X when used with EPCO's Luminaire Housing
Dimming Control	10%-100%; Requires 0-10V Luminaire Control Switch/Device
Industry Certifications	ETL Classified (per UL 1598/8750); RoHS Compliant; LM-79** and LM-80 Reports

**See the LED RetroFit Conversion Kit product data sheet (E02-150-012) for more information about the LM79 Report.

LED RETROFIT CONVERSION KIT — ORDERING CHART



T5 AND T8 LED FIXTURE BRACKET KITS



Energy consumption is a significant component of your company's operating expense. Engineered Products Company (EPCO) offers a wide variety of Fixture Bracket RetroFit Conversion Kits to address the Building Owner's and Facility Manager's various needs for lighting system upgrades.

We convert older T12 or T8 fluorescent lamps using magnetic ballast to strip-type fixtures using T5 or T8 LED.

Our low cost Fixture Bracket RetroFit Conversion Kits take into account budget, operating environment, required lumen output, energy saving goals, minimum efficacy requirements for utility rebates, and other parameters to ensure we deliver the optimal lighting system solution.

We offer Fixture Bracket RetroFit Conversion Kits for energy efficient bi-pin T5 or T8 LED in two configurations:

- Standard — Fixture Bracket RetroFit Conversion Kits (4-foot and 8-foot lengths)
- Pre-wired — Fixture Bracket RetroFit Conversion Kits (4-foot and 8-foot lengths; includes supply line and luminaire disconnect).

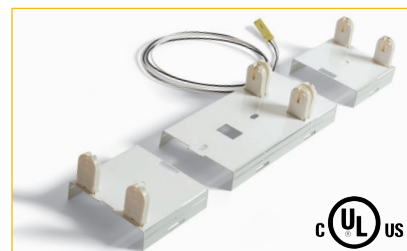
These kits are specifically intended for use with Type B single-end powered bi-pin T5 or T8 LED Lamps classified to UL Standard 1598C.

Our Fixture Bracket RetroFit Conversion Kits mean your upgraded lighting system will:

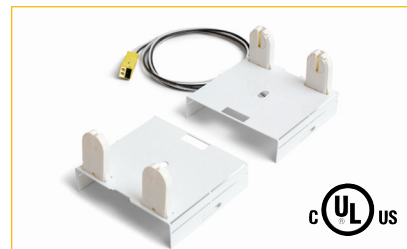
- Consume 30% less energy.
- Easily integrate with automatic lighting controls and occupancy sensors.
- Improve the look and feel of your environment.

BENEFITS FOR THE BUILDING OWNER AND FACILITY MANAGER

- Retrofitting takes half the time and half the cost compared to installing a new lighting system.
- Expedites installation time by 25%!
- Simple upgrade to energy efficient lighting.
- Initial energy savings up to 40% or more.
- Payback periods from 15 months to 3 years for most installations.
- Sustainable ongoing energy savings.
- The original fixture housing is reused.
- Minimal rewiring and recycling on the job site.



8-FT T8 LED RETROFIT KIT



4-FT T8 LED RETROFIT KIT

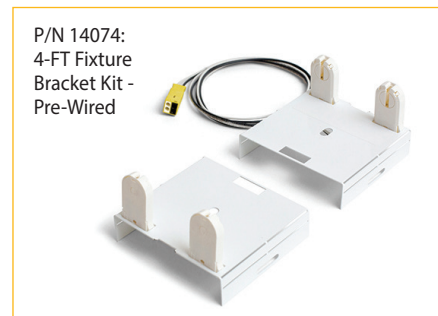
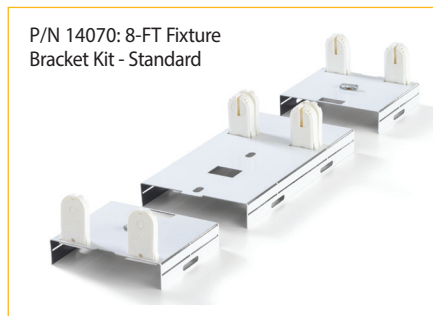
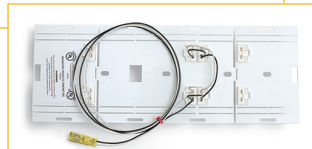
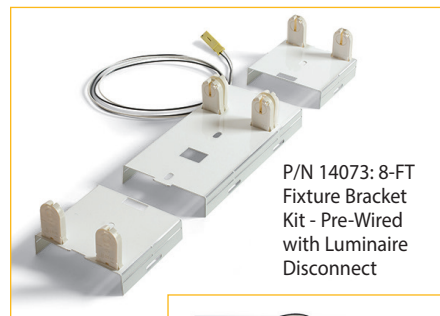


8-FT T8 LED RETROFIT KIT

TYPICAL APPLICATIONS:

- Commercial Buildings
- Industrial Facilities
- Factories
- Warehouses and Storage Areas
- Strip Malls and Shopping Centers
- Schools and Recreation Areas
- Airport, Train and Bus Terminals
- Fast Food Restaurants
- Other applications where retrofitting existing illumination systems will provide improved lumen output and energy savings.

T5 AND T8 LED FIXTURE BRACKET KITS (CONTINUED)



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
T5 and T8 LED Fixture Bracket RetroFit Conversion Kits (From T8 or T12 Fluorescent Lamps)										
14070	14070	8-FT Fixture Bracket Kit: Uses four (4) T8 LED Lamps	EA	1	BG	10	10	10	Yes	14
14070B	14072	8-FT Fixture Bracket Kit (BULK): Uses four (4) T8 LED Lamps	EA	1	BN	20	20	20	Yes	28
14071	14071	8-FT Fixture Bracket Kit: Uses two (2) T8 LED Lamps	EA	1	BG	10	10	10	Yes	14
14073	14073	8-FT Fixture Bracket Kit - Pre-Wired: Uses four (4) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and four (4) Dead-End Lamp Holders	EA	1	BG	10	10	10	Yes	15
14073B	14075	8-FT Fixture Bracket Kit - Pre-Wired (BULK): Uses four (4) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and four (4) Dead-End Lamp Holders	EA	1	BN	20	20	20	Yes	30
14074	14074	4-FT Fixture Bracket Kit - Pre-Wired: Uses two (2) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and two (2) Dead-End Lamp Holders	EA	1	BG	10	10	10	Yes	8
14074B	14078	4-FT Fixture Bracket Kit - Pre-Wired (BULK): Uses two (2) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and two (2) Dead-End Lamp Holders	EA	1	BN	20	20	20	Yes	16
14076	14076	4-FT Fixture Bracket Kit: Uses two (2) T8 LED Lamps	EA	1	BG	10	10	10	Yes	8
Fixture Bracket RetroFit Conversion Kit Accessories										
14080	14080	Wiring Compartment Ballast Cover: 4-FT - White, Includes five (5) 1/4 Turn Retainer Clips for 4.25" Wide Fixture Housing ONLY	EA	1	BX	20	20	20	Yes	27

Note: Also available for T5 LED Lamps. Contact our Inside Sales Department (sales@engproducts.com or 800.336.1976).

- Notes:**
1. Part Numbers 14070, 14070B, 14071, 14073, 14073B, 14074, 14074B, and 14076 require a Type B Single-End Powered Bi-Pin T8 LED Lamp; classified to UL Standard 1598C. These part numbers also require the incoming line supply voltage be connected to the single powered end of the T8 LED Lamp.
 2. Pre-Wired Part Numbers 14073, 14073B, 14074, and 14074B require the incoming line supply voltage must be connected to the HOT and Neutral (Black and White) conductors on the wiring harness luminaire disconnect.
 3. Part Numbers 14070B, 14073B, 14074B, and 14080 must be ordered in quantities of twenty (20).

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

T8 LED WIRING HARNESS KITS

Upgrade your lighting system to LED technology at the lowest possible cost by installing EPCO's Strip-Type Wiring Harness RetroFit Kits. These easy-to-install Wiring Harness kits provide you with an energy efficient upgrade from traditional T8 or T12 fluorescent lamps to T8 LED Lamps. This lowers your energy consumption up to 40%, provides long-term sustainable energy savings, complies with local and national energy regulations, and qualifies for rebates from your electric utility.

Easy to install, these pre-wired harness kits connect to the incoming 120-277V supply line voltage, bypassing the original ballast via the luminaire disconnect and directly to the luminaire.

Our wiring harness kits are intended for use with Type B single-end powered bi-pin T8 LED Lamps classified to UL Standard 1598C.

T8 LED TROFFER WIRING HARNESS KITS

EPCO's pre-wired Wiring Harness RetroFit Kits for 2x2-foot or 2x4-foot lighting troffers in 2, 3, or 4 lamp configurations is an affordable, low-cost T8 LED retrofit option to improve your lighting system.

Reduce your energy consumption up to 40%, get long-term sustainable energy savings, improve your building's overall energy efficiency, and comply with local and national energy regulations to qualify for rebates from your electric utility.

Compatible with all existing recessed lighting troffers with prismatic lenses or parabolic louvers. The two- or three-lamp configurations are intended for use with Type B single-end powered bi-pin T8 LED Lamps classified to UL Standard 1598C.

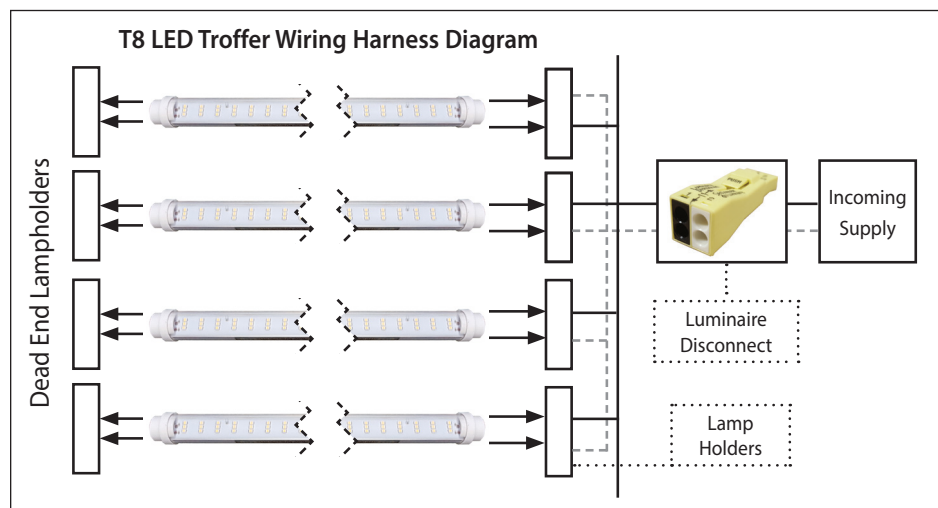
Easy to install, these pre-wired harness kits connect to the incoming 120-277V supply line voltage, bypassing the original ballast via the luminaire disconnect and directly to the luminaire.



STRIP-TYPE WIRING HARNESS KIT

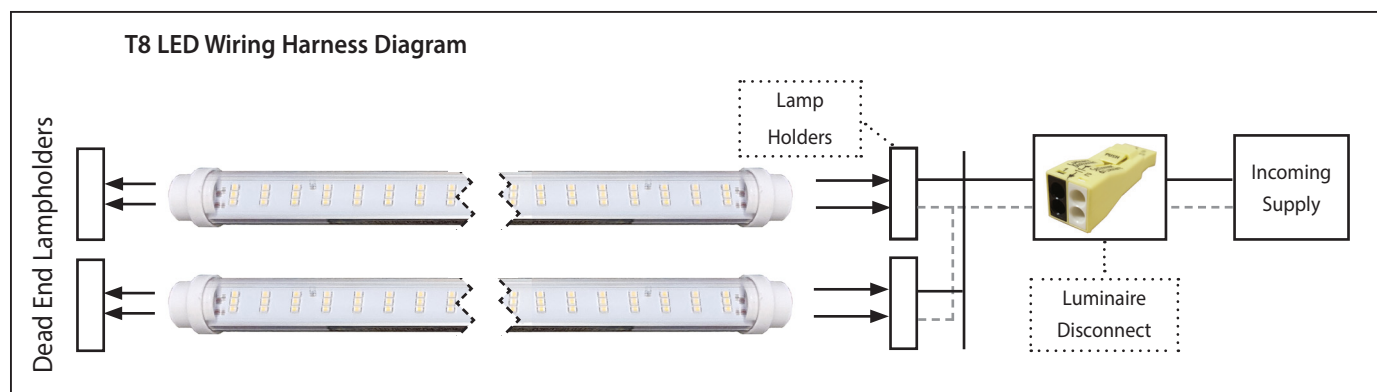


TROFFER WIRING HARNESS KIT



TYPICAL APPLICATIONS:

- Warehouses
- Production and Manufacturing Facilities
- Food Preparation Facilities
- Storage Facilities
- Retail Storage Areas
- Industrial Facilities
- Auto, Truck, and Marine Repair Shops
- Transportation Facilities
- Parking Garages



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Wiring Harness RetroFit Conversion Kits for T8 LED Lamps (From T8 or T12 Fluorescent Lamps)										
14087	14087	8-FT Fixture Wiring Harness Kit: Uses four (4) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and four (4) Dead-End Lamp Holders	EA	1	BG	10	10	10	Yes	5
14088	14088	4-FT Fixture Wiring Harness Kit: Uses two (2) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and two (2) Dead-End Lamp Holders	EA	1	BG	10	10	10	Yes	5
14089	14089	8-FT Fixture Wiring Harness Kit: Uses two (2) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and two (2) Dead-End Lamp Holders	EA	1	BG	10	10	10	Yes	5
Fixture Bracket RetroFit Conversion Kit Accessories										
14080	14080	Wiring Compartment Ballast Cover: 4-FT - White; Includes five (5) 1/4 Turn Retainer Clips for 4.25" Wide Fixture Housing ONLY	EA	1	BX	20	20	20	Yes	27
Troffer Wiring Harness RetroFit Conversion Kits for T8 LED Lamps (From T8 or T12 Fluorescent Lamps)										
14082	14082	4-FT Troffer Wiring Harness Kit: Uses two (2) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and two (2) Dead-End Lamp Holders	EA	1	BG	10	10	10	Yes	4
14083	14083	4-FT Troffer Wiring Harness Kit: Uses three (3) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and three (3) Dead-End Lamp Holders	EA	1	BG	10	10	10	Yes	4
14084	14084	4-FT Troffer Wiring Harness Kit: Uses four (4) T8 LED Lamps; Includes 4-FT Supply Line Jumper with Luminaire Disconnect and four (4) Dead-End Lamp Holders	EA	1	BG	10	10	10	Yes	4

Note: Wiring Harness Part Numbers 14082, 14083, 14084, 14087, 14088, and 14089 are specifically for use with a Type B Single-End Powered Bi-Pin T8 LED Lamps only; classified to UL Standard 1598C. The incoming line supply voltage must be connected to the HOT and Neutral (Black and White) conductors on the wiring harness luminaire disconnect.

DON'T SEE WHAT YOU WANT? LET EPCO'S CUSTOM CAPABILITIES HELP YOU!

For T5 or T8 LED Lamp Strip-Type Luminaire Applications

We provide "customized" solutions that meet the most stringent customer requirements. As the industry leader in the custom design, development, and production of fixture bracket kits and wiring harness retrofit kits for Strip-Type lighting systems.

We work side-by-side with our customers to help them configure the right application solution(s) to meet their needs.

For T8 LED Lamp Troffer Luminaire Applications

EPCO's experienced engineers can provide comprehensive solutions that will meet the most stringent customer and industry requirements. We are an industry leader in the custom design and manufacturing for Troffer lighting system wiring harness retrofit kits.

In addition, our production department and assembly teams can manage any specialized packaging requirements you need using our certified suppliers.

Contact your local EPCO Sales Representative (See Page 93) or EPCO Inside Sales at sales@engproducts.com or 800.336.1976 for more information.



UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

T5 AND T8 FLUORESCENT FIXTURE BRACKET KITS



Convert older 4-foot and 8-foot T8 or T12 strip type fixtures using magnetic ballast into energy efficient T5 or T8 luminaires. Each kit includes T5 or T8 Bi-Pin Lamp Sockets, RetroFit Bracket Socket Plates, and Self-Tapping Screws.

BENEFITS FOR THE FACILITY OWNER AND FACILITY MANAGER

- Complies with UL Standard 1598B.
- When you convert your old light fixtures with a simple upgrade to T5 or T8 luminaires using EPCO's RetroFit Conversion Kit you will realize energy savings up to 40% and your ROI can be as short as 15 months.
- Your original light fixture housing is reused. This reduces the retrofit conversion time at half the cost and half the time compared to the installation of a new fixture.
- The installer only needs to complete ballast lead terminations to finish the retrofit installation.
- Improved lumen performance.
- Simplifies your lamp inventory to one lamp type and color temperature.

CONTRACTOR BENEFITS

- Labor savings! The combination of high efficiency ballast, T5 or T8 lamps, and the low cost of EPCO's Fixture Bracket RetroFit Conversion Kits is a fast and easy installation.
- Requires minimal rewiring.
- Minimal recycling on the jobsite.
- Viable retrofit opportunities in commercial, industrial, and institutional buildings that have not converted to the energy efficient T5 or T8 lighting systems.

CONVERT TO T8 FLUORESCENT LAMPS

T12 or T8 fluorescent lamps that historically ran on magnetic ballast for general indoor lighting are becoming extremely difficult, if not impossible to buy.

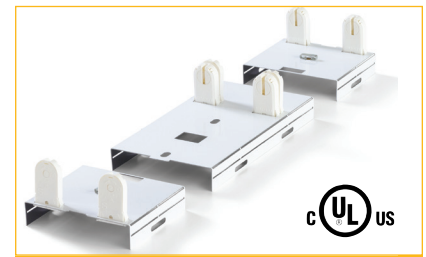
Upgrade to a very affordable lighting system, using:

- EPCO's Fixture Bracket RetroFit Conversion Kits
- T8 Fluorescent lamps
- Energy efficient electronic ballast

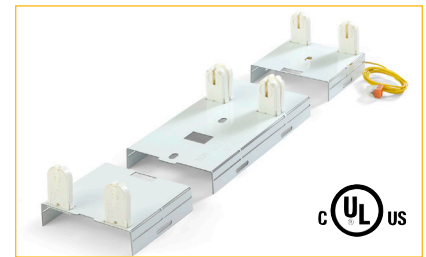
This combination of components consumes 40% less energy than older lighting systems. The result is improved lumen output, color characteristics, and efficacy compared to older magnetic-type lighting systems using T12 and T8 fluorescent lamps.

CONVERT TO T5 FLUORESCENT LAMPS

If there are spaces in your building that still use mercury vapor or high-pressure sodium lamps for high-ceiling lighting systems, retrofit to T5 fluorescent lamps using EPCO's Fixture Bracket RetroFit Conversion Kits. T5 lamps have higher lumen output than older T8 and T12 fluorescent lamps, and are more suitable for high-bay applications.



8-FT T8 RETROFIT KIT

8-FT T8 RETROFIT KIT
PRE-WIRED

4-FT T8 RETROFIT KIT

TYPICAL APPLICATIONS:

- Commercial Buildings
- Strip Malls and Shopping Centers
- Residential Multi-Dwellings Buildings
- Schools and Recreation Areas
- Industrial Buildings
- Factories
- Warehouses and Storage Buildings
- Airport, Train, Bus Terminals, and other transportation
- Outdoor Signage Backlighting
- Lightboxes
- Other applications where retrofitting existing systems will provide energy savings and improved higher lumen output

T8 FLUORESCENT FIXTURE BRACKET KIT PART NUMBERS

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
T8 Fluorescent Fixture Bracket RetroFit Conversion Kits (From T12 Fluorescent Lamps)										
14050	14050	8-FT Fixture Bracket Kit: Uses four (4) T8 Fluorescent Lamps	EA	1	BG	10	10	10	Yes	11
14050B	14052	8-FT Fixture Bracket Kit (BULK): Uses four (4) T8 Fluorescent Lamps	EA	1	BN	20	20	20	Yes	23
14051	14051	8-FT Fixture Bracket Kit - Pre-Wired: Uses four (4) T8 Fluorescent Lamps; Includes 4-FT Supply Line Jumper with WAGO® Connector	EA	1	BG	10	10	10	Yes	12
14051B	14053	8-FT Fixture Bracket Kit - Pre-Wired (BULK): Uses four (4) T8 Fluorescent Lamps; Includes 4-FT Supply Line Jumper with WAGO® Connector	EA	1	BN	20	20	20	Yes	24
14055	14055	8-FT Fixture Bracket Kit: Uses two (2) T8 Fluorescent Lamps	EA	1	BG	10	10	10	Yes	11
14056	14056	8-FT Fixture Bracket Kit - Pre-Wired: Uses two (2) T8 Fluorescent Lamps; Includes 4-FT Supply Line Jumper with WAGO® Connector	EA	1	BG	10	10	10	Yes	11
14057	14057	4-FT Fixture Bracket Kit: Uses one (1) T8 Fluorescent Lamp	EA	1	BG	10	10	10	Yes	6
14090	14090	4-FT Fixture Bracket Kit: Uses two (2) T8 Fluorescent Lamps	EA	1	BG	10	10	10	Yes	6

T5 FLUORESCENT FIXTURE BRACKET KIT PART NUMBERS

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
T5 Fluorescent Fixture Bracket RetroFit Conversion Kits (From T8 or T12 Fluorescent Lamps)										
14060	14060	8-FT Fixture Bracket Kit: Uses four (4) T5 Fluorescent Lamps	EA	1	BG	10	10	10	Yes	11
14065	14065	8-FT Fixture Bracket Kit: Uses two (2) T5 Fluorescent Lamps	EA	1	BG	10	10	10	Yes	11
14066	14066	4-FT Fixture Bracket Kit: Uses two (2) T5 Fluorescent Lamps	EA	1	BG	10	10	10	Yes	6
14067	14067	4-FT Fixture Bracket Kit: Uses one (1) T5 Fluorescent Lamp	EA	1	BG	10	10	10	Yes	6

Notes: 1. Part Numbers 14050, 14050B, 14051, 14051B, 14055, 14056, 14057 and 14090 require an Instant Start or Programmed Start Ballast.
 2. Part Numbers 14050B and 14051B must be ordered in quantities of twenty (20).
 3. Part Numbers 14060, 14065, 14066 and 14067 require a Programmed Start Ballast.

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WIRING COMPARTMENT/BALLAST COVERS AND REFLECTORS

- Tool-less installation. Quickly and easily attaches to the Retrofit Conversion Kit Bracket using 1/4 Turn Retainer Clips.
- Complies with the majority of utility rebate requirements.
- Optimizes light output and helps to reduce energy consumption.
- Wiring Compartment/Ballast Cover (Steel) — P/N 14080: White, Reflectance 92%.
- Nominal Length: 4-Feet.
- Aluminum Reflectors — Improves the usable light.
 - P/Ns 14091 (6-inch) and 14095 (10-inch): White, Reflectance 92%.
 - P/Ns 14092 (6-inch) and 14096 (10-inch): Specular, Reflectance 96%.

P/N 14080: Wiring Compartment/Ballast Cover



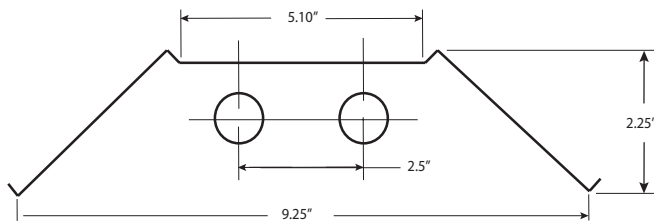
P/Ns 14091 and 14095: White Reflector



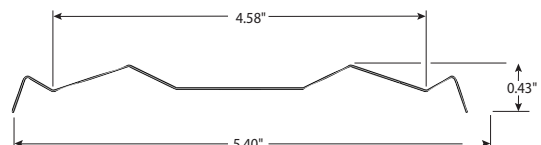
P/Ns 14092 and 14096: Specular Reflector



P/N 14085: 1/4 Turn Retainer Clips



10-inch Reflector



6-inch Reflector

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Fixture Bracket RetroFit Conversion Kit Accessories										
14080	14080	Wiring Compartment/Ballast Cover: 4-FT - White; Includes five 1/4 Turn Retainer Clips for 4.25" Wide Fixture Housing ONLY	EA	1	BX	20	20	20	Yes	27
14085	14085	1/4 Turn Retainer Clips: for Ballast Cover and Reflectors	EA	1	BG	42	42	42	Yes	1
14091	14091	6-Inch White Reflector: Nominal Width 5.40", with 1/4 Turn Retainer Clips, for 4.58" Wide Fixture Housing ONLY	EA	1	BX	20	20	20	Yes	14
14092	14092	6-Inch Specular Reflector: Nominal Width 5.40", with 1/4 Turn Retainer Clips, for 4.58" Wide Fixture Housing ONLY	EA	1	BX	20	20	20	Yes	14
14095	14095	10-Inch White Reflector: Nominal Width 9.25", with 1/4 Turn Retainer Clips, for 5.10" Wide Fixture Housing ONLY	EA	1	BX	20	20	20	Yes	16
14096	14096	10-Inch Specular Reflector: Nominal Width 9.25", with 1/4 Turn Retainer Clips, for 5.10" Wide Fixture Housing ONLY	EA	1	BX	20	20	20	Yes	16

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UTILITY LIGHTING

Our energy efficient and cost-effective Utility Luminaires and Accessories meet a very broad variety of lighting applications. All utility luminaires are UL listed for use in “damp” or “wet” environments and meet the 2017 National Electric Code lighting installation requirements for commercial and agricultural buildings.

PROSERIES™ LED UTILITY LUMINAIRES

The ProSeries LED Utility Luminaires are rated for use in indoor, outdoor and “wet” locations and available in five (5) configurations:

- ProSeries Elite Ceiling/Pendant Mount LED Luminaire
- ProSeries LED Luminaire Upgrade
- ProSeries LED Luminaire
- ProSeries Elite Wall Mount LED Luminaire
- ProSeries Medium Base Luminaire

PROSERIES “JUNIOR” LED UTILITY LUMINAIRES

Designed specifically for retrofitting and upgrading “jelly jar” luminaires. Our economically designed ProSeries “Junior” LED Utility Luminaires provide high lumen output, maximum outward and downward lighting, dramatically reduced energy consumption, and lowered electrical expenses. See Page 36 for more information.

15000 SERIES UTILITY LUMINAIRES

The foundation of our single-lamp luminaires is our 15000 Series. EPCO has sold more 15000 Series luminaires than any other manufacturer’s comparable luminaire because of its outstanding quality and in-use longevity. UL listed, 15000 Series Luminaires are rated for use in “damp” locations and include a “corrosion-resistant” nickel-plated brass screw shell at no extra cost.

Definition — Wet and Damp Locations

Luminaires installed in wet or damp locations shall be installed such that water cannot enter or accumulate in wiring compartments, lamp holders, or other electrical parts. All luminaires installed in wet locations shall be marked, “Suitable for Wet Locations”. All luminaires installed in damp locations shall be marked, “Suitable for Wet Locations” or “Suitable for Damp Locations”

From the 2017 National Electrical Code		Underwriters Laboratories (UL) Definition	
Dry Locations	A location not normally subjected to dampness or wetness. A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a building under construction.	Dry Locations	A location not normally subject to dampness, but may include a location subject to temporary dampness, as in the case of a building under construction, provided ventilation is adequate to prevent an accumulation of moisture.
Damp Locations	Locations protected from weather and not subject to saturation with water or other liquids but subject to moderate degrees of moisture. Examples of such locations include partially protected locations under canopies, marquees, roofed pen porches, and like locations, and interior locations subject to moderate degrees of moisture, such as basements, some barns, and some cold storage buildings.	Damp Locations	An exterior or interior location that is normally or periodically subject to condensation of moisture in, on, or adjacent to, electrical equipment, and includes partially protected locations.
Wet Locations	Installations underground or in concrete slabs or masonry in direct contact with the earth; in locations subject to saturation with water or other liquids, such as vehicle washing areas; and in unprotected locations exposed to weather.	Wet Locations	A location in which water or other liquid can drip, splash, or flow on or against electrical equipment. A wet location luminaire shall be constructed to prevent the accumulation of water on live parts, electrical components, or conductors not identified for use in contact with water.

PROSERIES LED UTILITY LUMINAIRE ENGINE

The ProSeries LED Utility Luminaire Engine is a driverless LED light engine with 93% of electrical efficiency suitable for a variety of lighting applications.

We use high-power LEDs which provide excellent white-light distribution and color-rendering quality that portrays the true colors of objects with no perceptible flicker at 120 Hz. This properly designed LED light engine reduces energy consumption and lowers carbon emissions, and its small form factor is ideal for universal building integration.

Producing only 79 lumens per watt and built with high-quality materials and workmanship, this durable IP65 rated weather-resistant LED light engine uses solid core, pre-shrunk silicone gaskets to reinforce a water-tight seal against outside environment. This combination of materials ensures a consistent and reliable long lasting performance at a very cost-effective, competitive price.

A circular distribution pattern evenly distributes light at all lateral angles; requiring fewer fixtures than traditional illumination sources. See Figure 1.

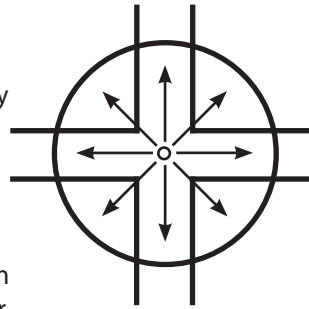


Figure 1



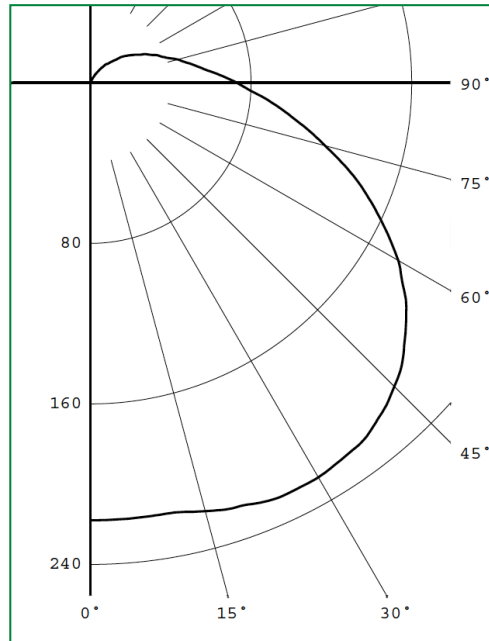
LED UTILITY LUMINAIRE ENGINE

DEG	CANDELA	LUMENS
0	218	
5	218	21
15	221	63
25	227	105
35	225	141
45	214	165
55	192	171
65	159	158
75	121	128
85	87	95
90	73	
95	61	67
105	45	47
115	33	33
125	24	22
135	15	12
145	8	5
155	2	1
165	0	0
175	0	0
180	0	

ZONAL LUMEN	SUMMARY
ZONE	LUMENS
0- 30	188
0- 40	329
0- 60	666
0- 90	1047
90-120	148
90-130	169
90-150	186
90-180	187
0-180	1235

%FIXT
15.3
26.7
53.9
84.8
12.0
13.7
15.1
15.2
100.0

EFFICACY = 79.2 lm/W
CIE TYPE - SEMI-DIRECT
LUMINAIRE SPACING CRITERION = 1.57



PHOTOMETRICS FOR LED UTILITY LUMINAIRE ENGINE

Luminaire Quality Metrics — LM-79 Report

EPCO's LM-79 Report captures the ProSeries LED luminaire engine's overall electrical characteristics and photometric measurements (lumen output) performance. This report is a snapshot of the spatial distribution of light and color attributes under specified operating conditions. However, this report does not address lifetime ratings for this LED luminaire engine, changing performance over time (e.g., lumen maintenance), or the LED luminaire housing's internal temperature.

SPECIFICATIONS

- Power Consumption: .12 Amps
- Power Factor: .98 (minimum)
- LED Circuits: 50,000 hour life, minimum
- Total Harmonic Distortion (THD): <20%
- Wiring Harness: 3-Wire (Black, Neutral, and Ground) quick connect with pre-stripped 3/8" (.375) leads; 167°F (75°C) minimum supply wire required.
- Operating Voltage: 120 Volts only
- Ambient Operating Temperature: -4°F (-20°C) to 113°F (45°C).
- Luminaire Efficacy: 79 lm/W
- Dimmable: Down to 10% of rated output

LUMEN OUTPUT

- Luminaire Source: High power LEDs
- Color: 5,000 - 5,400K (Daylight)
- Lumens: 1200+ Minimum
- Color Rendering Index (CRI): >80.



PROSERIES LED UTILITY LUMINAIRE AND LED UPGRADE

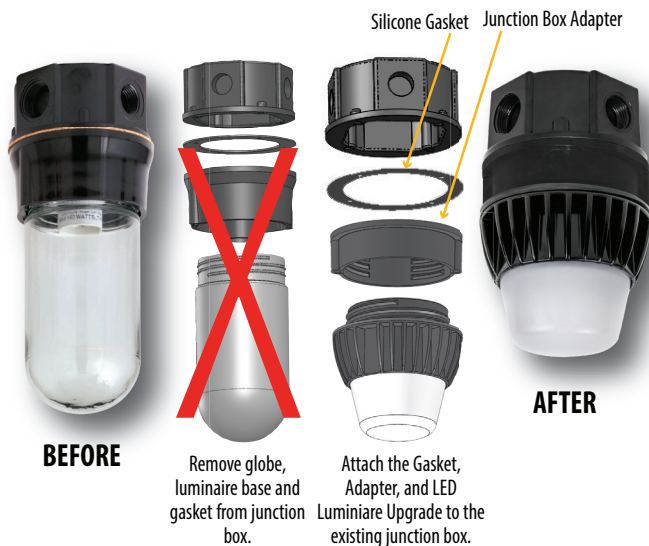
BENEFITS

- ETL Listed to UL Standard 1598 (tested).
- Meets the requirements of the 2017 National Electrical Code: Articles 410.10(A), 410.48, 410.52, 410.104(A), 410.117(A), 547.5(C)(1)(2).
- Suitable for use in indoor, outdoor, or wet location applications.
- Equivalent to 75-Watts of incandescent lumen output that consumes only 15-Watts of electricity.
- Provides extra junction box capacity for adding an additional power circuit.
- Easy to install; uses eight (8) mounting brackets that are "in-line" with 1/2" and 3/4" trade size knockouts; eliminates a 2" x 4" stub-in by the installer.
- Luminaire Efficacy: 79 lm/W
- Affordable LED illumination that provides dramatically better visibility.
- Reliable, durable, maintenance free performance.
- Optimal illumination, significant energy savings and virtually no luminaire maintenance.
- Eliminates ongoing replacement lamp cost when compared to incandescent, compact fluorescent, or LED lamps.
- Appropriate for use with all non-metallic wiring systems.
- Labor Savings! Fast, simple installation reduces labor cost.
- 5-Year Warranty.

FEATURES

- The 15-Watt LED luminaire produces 1200+ lumens.
- Includes an 18 cubic-inch PBT junction box and meets NEC junction box fill requirements for adding an additional circuit.
- Dimmable down to 10% of rated output.
- UV resistant high impact polycarbonate lens protects LEDs and provides even light distribution.
- The cast-aluminum Heat Sink is finished in a black "E" coat material that will not rust or corrode in the harshest environment.
- Silicone gasket protects against ingress of moisture and dust.
- Can be used where high-pressure wash down is required.

RETROFIT WITH THE PROSERIES LED UTILITY LUMINAIRE UPGRADE



Note: See Installation Requirements for the ProSeries LED Utility Luminaire and LED Upgrade shown on Page 97.



PROSERIES ELITE CEILING/PENDANT AND WALL MOUNT LED UTILITY LUMINAIRES

BENEFITS

- Durable die-cast aluminum housing heat sink is finished in a black "E" coat material; will not rust or corrode in the harshest environment.
- High-performance, long lasting LEDs make the luminaire virtually maintenance free.
- Circular distribution pattern evenly distributes light at all lateral angles; requires fewer fixtures than traditional illumination sources.
- Blends with existing fixtures, complements sight line uniformity.
- Weather-resistant IP65 rating for outdoor and indoor applications.
- Includes luminaire bracket and housing assembly, junction box and mounting lugs, LED light engine and diffuser assembly, high temperature silicone gasket, and brass and stainless steel hardware.
- Warranty: Five (5) years or 50,000 hours.

FEATURES

- Lightweight, compact, and timeless styling.
- 100% impact resistant, precision-molded, UV resistant polycarbonate diffuser.
- Superior LED optics magnify lumen output with minimal glare.
- Includes a 15.8 cubic-inch die-cast aluminum junction box and meets NEC junction box fill requirements for adding an additional circuit.
- Continuous silicone gasket between the junction box and luminaire base eliminates the ingress of dirt and moisture.



LED COLORED LENSES

Additional colors available!
Contact EPCO Inside Sales at
sales@engproducts.com or
800.336.1976 for more information.



Note: Red, Green, and Blue lenses have longer lead times.

Catalog Number	UPC Number	Description	Order Unit	Order Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
ProSeries LED Utility Luminaires										
15913	15913	ProSeries LED Utility Luminaire: includes 15-Watt LED Luminaire, Aluminum Heat Sink, and Junction Box	EA	1	BX	12	12	1	No	2
15915	15915	ProSeries LED Utility Luminaire (BULK): includes 15-Watt LED Luminaire, Aluminum Heat Sink, and Junction Box	EA	1	BN	12	12	12	Yes	17
15973	15973	ProSeries LED Utility Luminaire Upgrade: includes 15-Watt LED Luminaire, Aluminum Heat Sink, Junction Box Adapter, Silicone Gasket and Two (2) Screws	EA	1	BX	12	12	1	No	1
15975	15975	ProSeries LED Utility Luminaire Upgrade (BULK): includes 15-Watt LED, Luminaire Aluminum Heat Sink, Junction Box Adapter, Silicone Gasket and Two (2) Screws	EA	1	BN	12	12	12	Yes	14
ProSeries Elite LED Utility Luminaires										
15930	15930	ProSeries Elite Ceiling/Pendant Mount LED Utility Luminaire: includes Bracket and Housing Assembly, Silicone Gasket, and Hardware	EA	1	BX	12	12	1	No	2
15931	15931	ProSeries Elite Wall Mount LED Utility Luminaire: includes Bracket and Housing Assembly, Silicone Gasket, and Hardware	EA	1	BX	12	12	1	No	2

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

UTILITY LIGHTING

PROSERIES "JUNIOR" LED UTILITY LUMINAIRES

PROSERIES "JUNIOR" LED UTILITY LUMINAIRES

Our ProSeries Junior is designed specifically for retrofitting and upgrading "jelly jar" fixtures for utility lighting applications — swine, poultry, dairy cattle, fish, and other food and agricultural products. This 14-Watt LED Utility Luminaire Series provides high lumen output, maximum downward lighting, dramatically reduces energy consumption, and lowers your electrical expenses.

Upgrading your "jelly jar" light fixtures using our ProSeries Junior LED Utility Luminaire Series will lower your maintenance cost and gives you a better performing lighting system compared to outdated incandescent or compact fluorescent lamps, or an A19 LED lamp that is not intended or rated for enclosed applications.

PROSERIES JUNIOR LED UTILITY LAMP

The ProSeries Junior LED Utility Lamp (P/N 15980) is a direct replacement for incandescent or CFL lamps currently used in "jelly jar" fixtures. The LED lamp upgrades them into energy efficient and cost-effective LED luminaires. It adapts quickly and easily to most jelly jar fixtures on the market.

PROSERIES JUNIOR LED UTILITY LUMINAIRE UPGRADE

Our ProSeries Junior Utility Lamp Upgrade (P/N 15981) is a direct "hard-wire" replacement for light fixture bases that have been in service longer than five (5) years. Over time, deterioration from solid and hazardous waste pollution, moisture, UV emissions, and other environmental causes can start to occur.

PROSERIES JUNIOR LED UTILITY LUMINAIRE

As a complete luminaire, our polycarbonate and lightweight ProSeries "Junior" LED Utility Luminaire is highly desirable for animal confinement or horticultural farming operations, or for expanding and modifying an existing operation.

BENEFITS

- Suitable for wet and damp locations.
- Use for applications that require wash-down.
- No glass and no lamp breakage.
- ProSeries Junior LED Utility Lamp (P/N 15980) requires no rewiring; Includes E26 socket connector for direct, fast, and easy installation.
- Low energy consumption: Save 90% vs. incandescent lamps and 55% vs. CFLs.
- Integral heat sink prevents dust and insect accumulation.
- Return on investment in 12 months or less.

FEATURES

- Polycarbonate, lightweight construction will not rust or corrode.
- Uniformly distributes a 120° spread of glare-free lumen diffused light.
- Instant start, no flickering.
- Mercury free; no UV emissions, protects the environment.
- LED Engine provides consistent lumen output over changing voltage conditions.
- Includes luminaire disconnect for safe servicing without exposure to electrical shock (P/N 15981 and 15982).



SPECIFICATIONS

Voltage Range	120 - 277V via Built-in Constant Current Drive
Lumen Output	1440 Lumens @ 103 Lumens per Watt
Color Rendering Index (CRI)	>82
Correlated Color Temperature (CCT)	5000K
Operating Temperature	-4°F (20°C) to 113°F (45°C)
Surge Protection	Built-in Protection up to 2,400 Volts
Certification	ETL and Energy Star Certified
Warranty	5 Years at L ₇₀



P/N 15980: Includes 14-Watt LED Lamp with Internal Heat Sink and E26 socket adapter



P/N 15981: Includes 14-Watt LED Lamp Upgrade with Internal Heat Sink, Silicone Gasket, and Junction Box Adapter



P/N 15982: Includes 14-Watt LED Luminaire with Internal Heat Sink and 18 Cubic Inch Junction Box

RETROFIT WITH THE PROSERIES JUNIOR LED UTILITY LAMP (P/N 15980)



BEFORE



Remove globe from luminaire base.



Screw the connector into the socket base. Connect the luminaire disconnect.

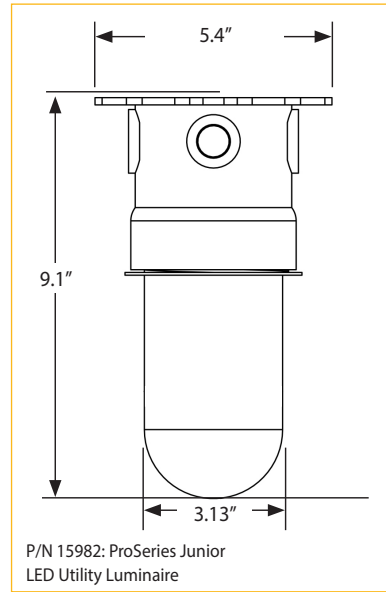
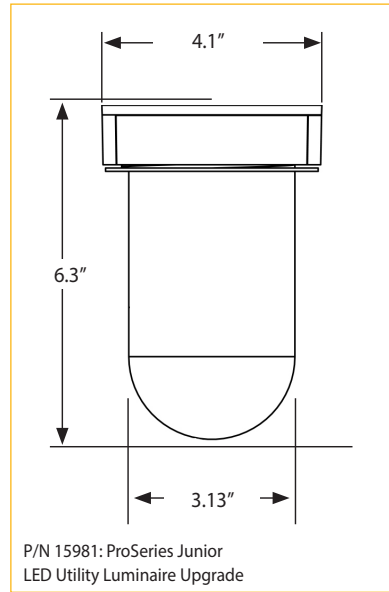


AFTER

UTILITY LIGHTING

PROSERIES "JUNIOR" LED UTILITY LUMINAIRES

PROSERIES "JUNIOR" LED UTILITY LUMINAIRES (CONTINUED)



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
15980	15980	ProSeries Junior LED Utility Lamp: 14-Watt LED Utility Lamp with Internal Heat Sink	EA	1	BX	12	12	1	No	1
15980B	15983	ProSeries Junior LED Utility Lamp (BULK): 14-Watt LED Utility Lamp with Internal Heat Sink	EA	1	BN	12	12	12	Yes	13
15981	15981	ProSeries Junior LED Utility Luminaire Upgrade: 14-Watt LED Lamp with Internal Heat Sink, Silicone Gasket, and Junction Box Adapter	EA	1	BX	12	12	1	No	1
15981B	15984	ProSeries Junior LED Utility Luminaire Upgrade (BULK): 14-Watt LED Lamp with Internal Heat Sink, Silicone Gasket, and Junction Box Adapter	EA	1	BN	12	12	12	Yes	13
15982	15982	ProSeries Junior LED Utility Luminaire: 14-Watt LED Utility Luminaire with Internal Heat Sink and 18 Cubic Inch Junction Box	EA	1	BX	12	12	1	No	2
15982B	15985	ProSeries Junior LED Utility Luminaire (BULK): 14-Watt LED Utility Luminaire with Internal Heat Sink and 18 Cubic Inch Junction Box	EA	1	BN	12	12	12	Yes	15

PROSERIES MEDIUM BASE LUMINAIRES

- UL Listed. Suitable for use in wet locations. File Number: E182610.
 - Meets requirements of the 2017 National Electrical Code: Articles 314.15, 314.16(A)(2), 314.17(C), 410.10(A), 410.104(A), 547.5(C)(1) and (2) and 547.8(A) and (B).
 - Includes an 18 cubic-inch PBT junction box and meets NEC junction box fill requirements for adding an additional circuit.
 - Appropriate for use with all non-metallic wiring systems.
 - Labor savings! Fast installation saves time and reduces labor cost.
 - Easy to install; uses eight (8) mounting brackets that are "in-line" with 1/2" and 3/4" trade size knockouts; eliminates a 2" x 4" stub-in by the installer.
- Note:** The Octi-Junction Box is not sold separately and will not fit our Ceiling Mount Luminaires P/Ns: 15050, 15051, 15055, and 15056.
- Rated for use with circuit conductors up to 302°F (150°C).
 - Can be used where high-pressure wash-down is required.
 - UV resistant, high impact, corrosion resistant construction.
 - Optional impact resistant quarter-turn safety cage attaches to the Octi-Junction Box without tools.

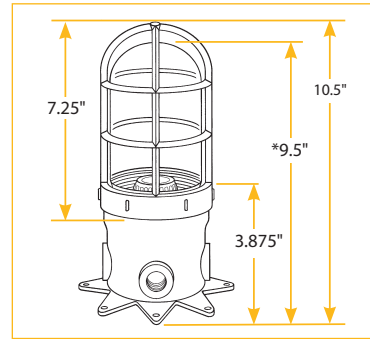
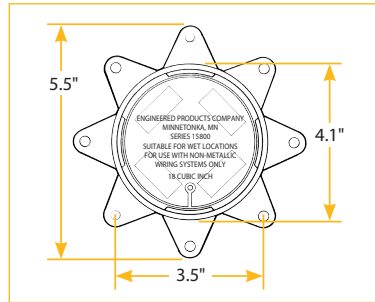
Shown with optional Safety Cage



PROSERIES

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

PROSERIES MEDIUM BASE LUMINAIRES (CONTINUED)



Note: Measured without the Optional Safety Cage



ProSeries Medium Base Octi-Junction Box Cover



18 Cubic Inch Octi-Junction Box uses eight (8) mounting brackets that are "in-line" knockouts; eliminates a 2" x 4" stub-in.

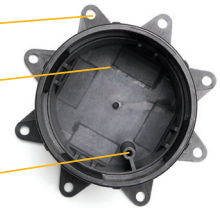
Meets the box fill requirements as referenced in the 2017 National Electrical Code: Articles 314.15, 314.16(A)(2), 314.17(C), 410.10(A), 410.104(A), 547.5(C)(1) and (2) and 547.8(A) and (B). The Octi-Junction Box provides additional capacity for an extra power circuit.

Captive stainless steel set screw and posi-stop detent tab on Octi-Junction Box Cover expedites fixture installation.

Recessed Octi-Junction Box Cover with integral nickel-plated brass screw shell accommodates high profile incandescent or compact fluorescent lamps.

Captive stainless steel set screw secures the Octi-Junction Box Cover to the Octi-Box — expedites fixture installation.

1/2" and 3/4" trade size knockouts.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
ProSeries Medium Base Utility Luminaires										
15800	15800	ProSeries Utility Luminaire: Standard Glass Globe; Rated for 150-Watt Incandescent Lamp (maximum)	EA	1	BX	12	12	1	No	3
15800B	15850	ProSeries Utility Luminaire (BULK): Standard Glass Globe; Rated for 150-Watt Incandescent Lamp (maximum)	EA	1	BN	12	12	12	Yes	38
15801	15801	ProSeries Utility Luminaire: Standard Glass Globe and Safety Cage; Rated for 150-Watt Incandescent Lamp (maximum)	EA	1	BX	12	12	1	No	3
15801B	15851	ProSeries Utility Luminaire (BULK): Standard Glass Globe and Safety Cage; Rated for 150-Watt Incandescent Lamp (maximum)	EA	1	BN	12	12	12	Yes	38
15805B	15855	ProSeries Utility Luminaire (BULK): Acrylic Prismatic Globe; Rated for 60-Watt Incandescent Lamp (maximum)	EA	1	BN	12	12	12	Yes	38
15806*	15806	ProSeries Utility Luminaire: Polycarbonate Clear Globe; Rated for 60-Watt Incandescent Lamp (maximum)	EA	1	BX	12	12	1	No	2
15806B	15856	ProSeries Utility Luminaire (BULK): Polycarbonate Clear Globe; Rated for 60-Watt Incandescent Lamp (maximum)	EA	1	BN	12	12	12	Yes	38
15807B*	15857	ProSeries Utility Luminaire (BULK): Tall Acrylic Prismatic Globe; Rated for 60-Watt Incandescent Lamp (maximum)	EA	1	BN	12	12	12	Yes	38
15810B	15860	ProSeries Utility Luminaire (BULK): Tempered Glass Globe; Rated for 150-Watt Incandescent Lamp (maximum)	EA	1	BN	12	12	12	Yes	38
ProSeries Medium Base Utility Luminaire Accessories										
15812	15812	Safety Cage: 1/4 Turn Attachment	EA	1	BX	12	12	1	No	1
15815	15815	Octi-Junction Box Cover: with Porcelain Lamp Holder	EA	1	BX	12	12	1	No	1
15681	15681	LED A21 Lamp: 15.5-Watt, 5000K, dimmable, Energy Star rated; Lumen output is equal to 100-Watt incandescent lamp	EA	1	BX	12	12	1	No	1

***Note:** Optional Safety Cage (Part Number 15812) will not fit ProSeries Part Number 15806 or 15807B.

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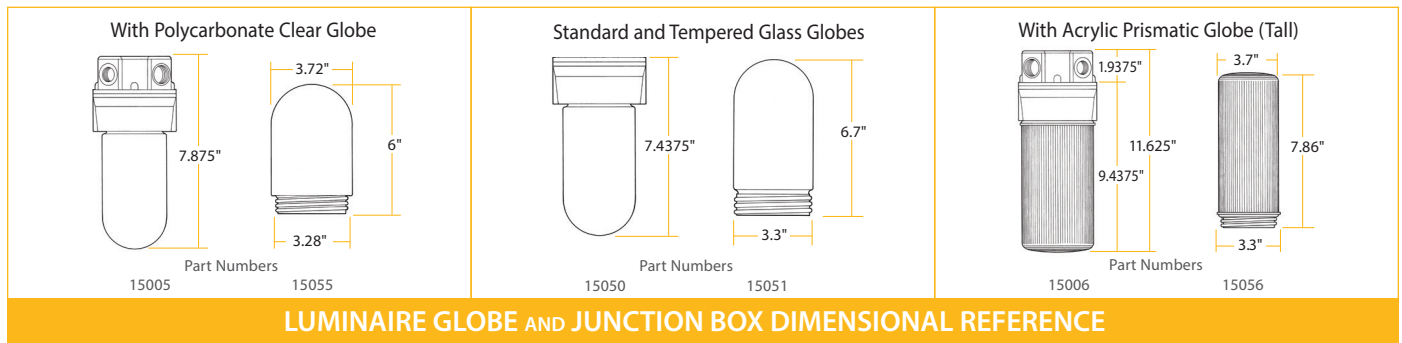
UTILITY LIGHTING

15000 SERIES: CEILING MOUNT LUMINAIRES

CEILING MOUNT LUMINAIRES

- UL Listed. File Number: E182610. Suitable for use in damp locations ONLY!
- Meets the requirements of the 2017 National Electrical Code: Articles 314.16(A)(2), 314.17(C), 410.10(A) and 547.5(C)(1, 2, and 3).
- Includes porcelain E26 lamp socket with corrosion resistant nickel-plated brass screw shell.
- High impact, corrosion resistant, compression molded phenolic junction box and luminaire base.
- Standard and Tempered Glass Globes rated for "A" Series incandescent lamps (150-Watt maximum).
- Polycarbonate and Acrylic Prismatic Globes rated for "A" Series incandescent lamps (60-Watt maximum).
- All ceiling mount luminaires are supplied with a cork gasket, corrosion resistant screws and rubber washer. Wired with 194°F (90°C) minimum supply wires (THHN).

Note: Meets the requirements of the Minnesota State Board of Electricity Electrical Wiring requirements for Agricultural Buildings.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
With 12 Cubic Inch Junction Box (15045)										
15000	15000	Utility Luminaire: Includes 1/2" and 3/4" Knockout Combo Junction Box, Standard Glass Globe, Cork Gasket, Screws, and Washer	EA	1	BX	12	12	12	Yes	24
15001	15001	Utility Luminaire: Includes 1/2" and 3/4" Knockout Combo Junction Box, Tempered Glass Globe, Cork Gasket, Screws, and Washer	EA	1	BX	12	12	12	Yes	24
15002	15002	Utility Luminaire: Includes 3/4" Knockout Junction Box, Standard Glass Globe, Cork Gasket, Screws, and Washer	EA	1	BX	12	12	12	Yes	24
15005	15005	Utility Luminaire: Includes 1/2" and 3/4" Knockout Combo Junction Box, Polycarbonate Globe, Cork Gasket, Screws, and Washer	EA	1	BX	12	12	1	No	2
15006	15006	Utility Luminaire: Includes 1/2" and 3/4" Knockout Combo Junction Box, Acrylic Prismatic Globe (Tall), Cork Gasket, Screws, and Washer	EA	1	BX	12	12	1	No	2
15007	15007	Utility Luminaire: Includes 1/2" and 3/4" Knockout Combo Junction Box, Acrylic Prismatic Globe, Cork Gasket, Screws, and Washer	EA	1	BX	12	12	1	No	2
Without Junction Box										
15050	15050	Utility Luminaire: Includes Standard Glass Globe, Cork Gasket, Screws, and Washer	EA	1	BX	12	12	12	Yes	20
15051	15051	Utility Luminaire: Includes Tempered Glass Globe, Cork Gasket, Screws, and Washer	EA	1	BX	12	12	12	Yes	20
15055	15055	Utility Luminaire: Includes Polycarbonate Clear Globe, Cork Gasket, Screws, and Washer	EA	1	BX	12	12	1	No	1
15056	15056	Utility Luminaire: Includes Acrylic Prismatic Globe (Tall), Cork Gasket, Screws, and Washer	EA	1	BX	12	12	1	No	1
15090	15090	Medium Bases: Globe not included	EA	1	BX	12	12	1	No	1

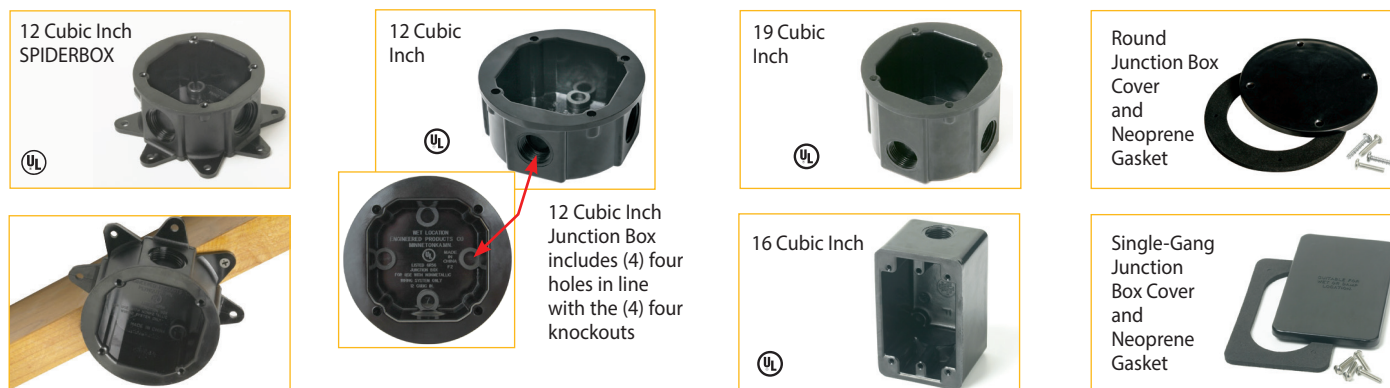
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NON-METALLIC JUNCTION BOXES

- UL Listed. File Number: E182992.
- Suitable for use in "wet" locations.
- Corrosion resistant.
- High impact compression molded phenolic plastic rated to 302°F (150°C).
- Meets the requirements of the 2017 National Electrical Code: Articles 314.15, 314.16(A)(2), 314.17(C), 547.5(C)(1) and (2).

SPIDERBOX NON-METALLIC JUNCTION BOXES

- Easy to install using the eight (8) mounting brackets that are in-line with knockouts.
- Eliminates a 2"x4" stub-in.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Standard Non-Metallic Junction Boxes										
15045	15045	12 Cubic Inch Junction Box: 1/2" and 3/4" Knockout Combo	EA	1	BX	12	12	12	Yes	6
15046	15046	12 Cubic Inch Junction Box: 1/2" Knockouts	EA	1	BX	12	12	12	Yes	6
15047	15047	12 Cubic Inch Junction Box: 3/4" Knockouts	EA	1	BX	12	12	12	Yes	6
15049	15049	19 Cubic Inch Junction Box: 3/4" Knockouts	EA	1	BX	12	12	12	Yes	6
15070	15070	16 Cubic Inch Single-Gang FS-C Type Junction Box: 1/2" Knockouts	EA	1	BX	12	12	12	Yes	6
15071	15071	16 Cubic Inch Single-Gang FS-C Type Junction Box: 3/4" Knockouts	EA	1	BX	12	12	12	Yes	6
15075	15075	Single-Gang Junction Box Cover and Neoprene Gasket	EA	1	BX	12	12	12	Yes	2
15905	15905	Round Junction Box Cover and Neoprene Gasket	EA	1	BX	12	12	12	Yes	2
SPIDERBOX Non-Metallic Junction Boxes										
15246	15246	12 Cubic Inch SPIDERBOX Junction Box: 1/2" Knockouts	EA	1	BX	12	12	12	Yes	6
15247	15247	12 Cubic Inch SPIDERBOX Junction Box: 3/4" Knockouts	EA	1	BX	12	12	12	Yes	6
15905	15905	Round Junction Box Cover and Neoprene Gasket	EA	1	BX	12	12	12	Yes	2

LAMPS**COMPACT FLUORESCENT LAMP**

- Wattage: 23
- Average Rated Life: 10,000 hours
- Color Rendering: >80 CRI
- High Lumen Efficacy
- Color Temperature: 5,000K
- Dimmable: No

**LED A21 LAMP**

- Wattage: 15.5
- Average Rated Life: 25,000 hours
- Color Rendering: >80 CRI
- High Lumen Efficacy
- Color Temperature: 5,000K
- Dimmable: Yes



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
15680	15680	Compact Fluorescent Lamp: 23-Watt, Self-Ballasted Lamp (5000K); Lumen output is equal to a 100-Watt Incandescent Lamp	EA	1	BX	50	50	1	No	1
15681	15681	LED A21 Lamp: 15.5-Watt, 5000K, dimmable, Energy Star rated; Lumen output is equal to 100-Watt Incandescent Lamp	EA	1	BX	12	12	1	No	1

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UTILITY LIGHTING

15000 SERIES: ACCESSORIES

LUMINAIRE GLOBES

STANDARD AND TEMPERED GLASS GLOBES

- Withstands extreme temperature changes.
- For use with "A" Series incandescent lamps (150-Watt maximum).

ACRYLIC PRISMATIC AND POLYCARBONATE GLOBES

- UV stabilized material. The Acrylic Prismatic Globes resist discoloration four times longer than polycarbonate material.
- 3 Year guarantee against discoloration from UV exposure. For applications that require high-pressure wash down.
- Acrylic Prismatic Globes feature internal ribbing and smooth exterior.
- For use with "A" Series incandescent lamps (60-Watt maximum).



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
15015	15015	Standard Glass Globe	EA	1	BX	32	32	32	Yes	34
15016	15016	Tempered Glass Globe	EA	1	BX	32	32	32	Yes	34
15020	15020	Polycarbonate Clear Globe	EA	1	BX	12	12	12	Yes	5
15025	15025	Acrylic Prismatic Globe (Tall)	EA	1	BX	12	12	12	Yes	5

Note: Luminaire Globes are sold ONLY in case quantities.

REPLACEMENT LAMP SOCKET

- High temperature porcelain lamp socket with 6-inch 18 AWG stranded wire leads.
- Includes corrosion resistant nickel-plated brass screw shell.
- Can be used with "A" Series incandescent lamps (150-Watt maximum).
- Interchangeable with luminaires built with phenolic sockets.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
15031	15031	Replacement Lamp Socket: Porcelain	BG	12	BG	0	0	12	Yes	1

WIRE GUARD

- Fits Standard Glass, Tempered Glass and Acrylic Prismatic (short) Globes only.
- 8 AWG steel, with a three-coat electrolytic plating.
- Clamp-type attachment.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
15063	15063	Wire Guard	EA	1	BX	0	0	1	No	2

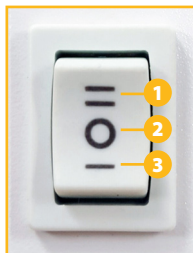
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MOTION SENSING LED CLOSET LUMINAIRE

Our Motion Sensing LED Closet Luminaire provides unparalleled performance, improved efficacy, more usable lumens per watt, and is a reliable and sustainable LED lighting solution for small areas.

OPERATING MODE — THREE (3) SWITCH OPTIONS

This luminaire features three (3) operating modes. Set the toggle switch on the Motion Sensing LED Closet Luminaire to the operating mode that suits your application.



1. **Wall Switch Operation:** Will operate as a “switched” luminaire (controlled by a standard wall switch).
2. **OFF:** Functions as standard ON/OFF Switch to energize the luminaire.
3. **Occupancy Mode:** The “Green” LED (next to the occupancy sensor) indicates the Motion Sensing LED Closet Luminaire is operating in the automatic mode to detect the presence of motion up to 20-feet away. The luminaire will continue to operate until no motion is detected for an additional three (3) minutes, then the luminaire will “Shut-Off”.

BENEFITS

- ETL Listed to UL 1598 Standards.
- Meets the requirements of the 2017 National Electrical Code: Articles 410.16A(1)(3), C(1)(3)(5), 410.52, and 410.74(A)(B).
- For “New” or “Retrofit” applications.
- Motion activated lighting. No separate line voltage is needed for a wall switch.
- Energy efficient and optimized light output.
- Operates on 120V line voltage.
- Suitable for indoor applications only.
- Five (5) year warranty.
- Prescriptive rebates may be available from electric utilities or co-ops.

FEATURES

- Designed for ceiling and wall mount applications.
- When used with the occupancy sensor, the luminaire automatically lights when occupancy is detected; turns off after three (3) minute vacancy.
- Significant energy savings.
- Cost-effective, eliminates batteries, and will save money.
- Corrosion resistant housing.
- Provides bright lighting in a small form factor.
- Complies with general rebate requirements for lighting upgrades.



MOTION SENSING LED CLOSET LUMINAIRE

LUMINAIRE INCLUDES:

- Motion Sensing LED Closet Luminaire
- Frosted Acrylic Diffuser

TYPICAL APPLICATIONS:

- Closets
- Garages
- Attics
- Storage and Utility Rooms
- Basements
- Storage Buildings
- Residential and Commercial
- And more...

UTILITY LIGHTING

MOTION SENSING LED CLOSET LUMINAIRE

SPECIFICATIONS

- 5.5" (139.7mm) H x 5.5" (139.7mm) W
- Power: 7-Watts (>.06 Amps)
- Power Factor: .09 or higher
- Total Harmonic Distortion (THD): 20% or less
- Sensor Type: Passive Infrared Sensor (PIR)
- Operating Voltage: 120V @ 60Hz, Only!
- Operating Temperature: 32°F (0°C) to 104°F (40°C)
- Switch: Yes (3-way; Automatic / Off / On)
- Dimmable: No

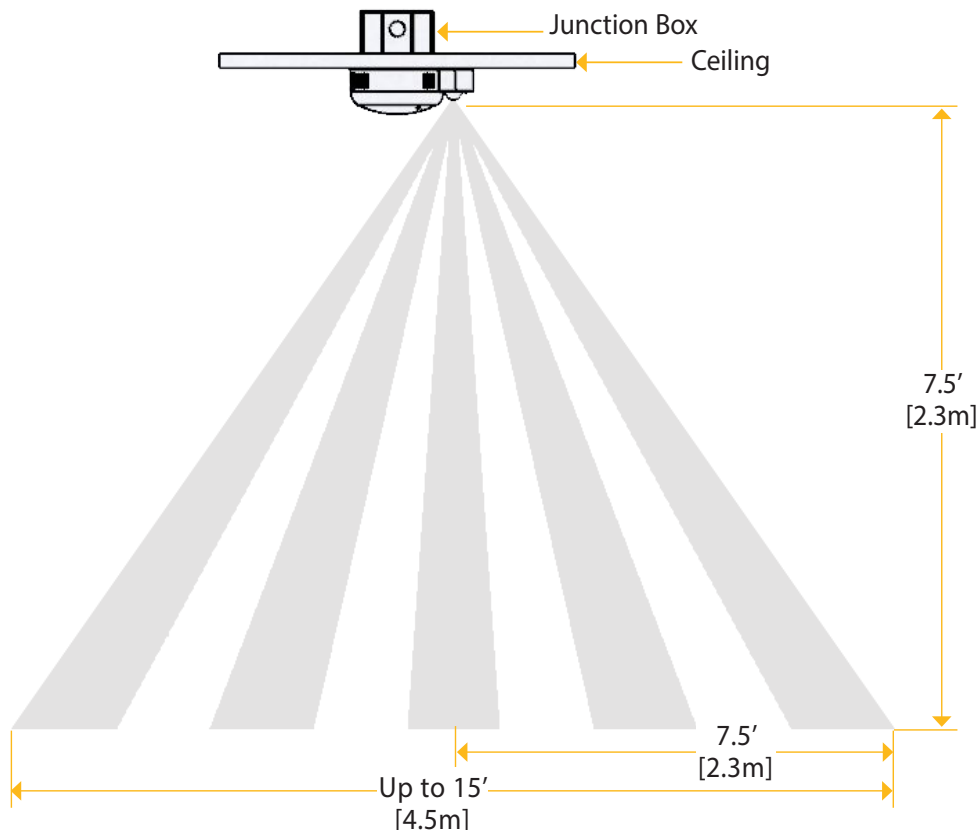
PRODUCTIVITY

- Efficacy: 70.8 lm/W
- Lumen Output: 519
- Correlated Color Temperature (CCT): 3,000K — Extra Warm White
- Color Rendering Index (CRI): 83
- Luminaire Range: 15-Feet (4.5 Meters)
- Luminaire Color: White



Catalog Number	UPC Number	Description	Order Unit	Order Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
16540	16540	Motion Sensing LED Closet Luminaire: includes 7-Watt LED Luminaire and Frosted Acrylic Diffuser	EA	1	BX	12	12	1	No	2

MOTION SENSING DIAGRAM



UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

9-WATT LED LUMINAIRES



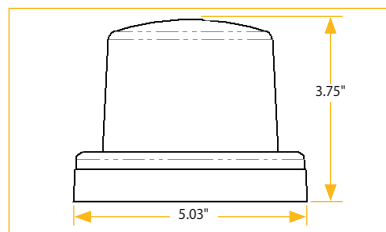
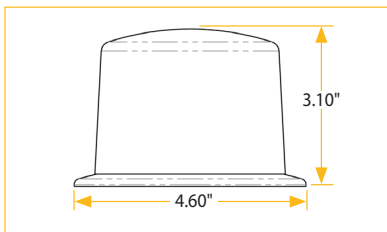
KEYLESS



PULL CHAIN

TYPICAL APPLICATIONS:

- Closets
- Garages
- Attics
- Utility Rooms
- Basements
- Storage Buildings
- Commercial, Industrial, and Residential Lighting
- And more...



LAMP COMPARISON

	60-Watt	13-Watt	9-Watt
Annual Energy Cost	\$36.75*	\$7.98*	\$5.52*
Lumen Output	890	900	800

Annual Energy Savings using a 9-Watt vs. a 60-Watt = 85% or \$31.23 Savings!

*The kWh of electricity used per day is 1.44 kWh for a 60-Watt Incandescent Lamp vs. 0.312 kWh for a 9-Watt LED Lamp based on operating 24 hours a day, 365 days at \$0.07 per kWh per day. Your actual savings will vary based on the amount of electricity you use and your supplier's cost per day may be more or less than the estimated savings presented in this example.

- UL Listed.
- Includes 9-Watt Bi-Pin LED Lamp and Polycarbonate Lamp Diffuser:
 - » Lamp Output = 800 Lumens
 - » Efficacy = 88 Lm/W
 - » Lamp Color = 2700K (Soft White)
- Can be used with a standard wall switch.
- 7" Conductors simplify installation.
- Medium Base fits 3.25 inch or 4.0 inch Outlet Box.
- Meets the requirements of the 2017 National Electrical Code: Articles 410.16(A)(1)(3), 410.52, 410.74(A)(B).
- Impact resistant construction.
- Suitable for indoor use only.
- Lamp Holder Rating: 120W-250VAC, 60Hz

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
16531	16531	9-Watt LED Luminaire: Keyless	EA	1	BX	24	24	24	Yes	11
16536	16536	9-Watt LED Luminaire: Pull Chain	EA	1	BX	24	24	24	Yes	11
15676	15676	Bi-Pin LED Lamp: 9-Watt	EA	1	BX	25	25	25	Yes	8

Part Number 16531 Includes GU24 Base; Part Number 16530. Part Number 16536 Includes GU24 Base; Part Number 16535.

Note: 9-Watt LED Luminaires are sold ONLY in case quantities of 24 per Carton.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

PORCELAIN AND PLASTIC LAMP HOLDERS

- UL Listed. File Number: E236781.
- Nickel-plated brass screw shell will not corrode.
- Fits 3.25" or 4.0" outlet box.
- UV resistant Lamp Holders will not fade or discolor.
- Optional Plastic and Metal Safety Cages fit all Lamp Holders.
- Includes corrosion resistant mounting screws.
- Meets the requirements of the 2017 National Electrical Code:
 - Part Numbers: 16500, 16502, 16510, 16512 and 16514 — Articles 410.74(A)(B) and 410.122
 - Part Numbers: 16520, 16522, 16524 and 16526 — Articles 410.52, 410.74(A)(B) and 410.122



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
16500	16500	Porcelain Lamp Holder: Keyless, 4-Terminal	EA	1	BX	48	48	48	Yes	33
16502	16502	Porcelain Lamp Holder: Pull Chain	EA	1	BX	48	48	48	Yes	35
16510	16510	Plastic Lamp Holder: Keyless, 4-Terminal	EA	1	BX	48	48	48	Yes	11
16512	16512	Plastic Lamp Holder: Pull Chain	EA	1	BX	48	48	48	Yes	13
16514	16514	Porcelain Lamp Holder: Pull Chain and 15 AMP Receptacle	EA	1	BX	48	48	48	Yes	40
16520	16520	Porcelain Lamp Holder: Keyless, 4-Terminal with 7" Black and White Conductors	EA	1	BX	48	48	48	Yes	33
16522	16522	Porcelain Lamp Holder: Pull Chain with 7" Black and White Conductors	EA	1	BX	48	48	48	Yes	35
16524	16524	Plastic Lamp Holder: Keyless, 4-Terminal with 7" Black and White Conductors	EA	1	BX	48	48	48	Yes	11
16526	16526	Plastic Lamp Holder: Pull Chain with 7" Black and White Conductors	EA	1	BX	48	48	48	Yes	13

Accessories

15680	15680	Compact Fluorescent Lamp: 23-Watt, Self-Ballasted Lamp (5000K); Lumen output is equal to 100-Watt Incandescent Lamp	EA	1	BX	50	50	1	No	1
15681	15681	LED A21 Lamp: 15.5-Watt, 5000K, dimmable, Energy Star rated; Lumen output is equal to 100-Watt Incandescent Lamp	EA	1	BX	12	12	1	No	1
16100	16100	Safety Cage: Yellow	EA	1	BX	10	10	10	Yes	1
16501	16501	Safety Cage: Metal	EA	1	BX	12	12	12	Yes	6

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

INSTALLING LAMP HOLDERS FOR POULTRY FARMING APPLICATIONS

EPCO recommends using only Porcelain Lamp Holder(s) for poultry farming applications. The lamp holder must be installed in a manner that will not permit dust or moisture to enter the junction box. In addition, the porcelain lamp holder must be mounted vertically with the lamp positioned below the lamp holder on a water-tight, dust-tight non-metallic junction box with an effective gasket between the junction box and the lamp holder as shown in the photo to the right.

Use any of the combined part numbers below to complete the installation as shown.



Porcelain Lamp Holder (P/N 16500),
Cork Gasket (P/N PE05-003-000), and
Junction Box (P/N 15246)

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
PE05-003-000	10055	Cork Gasket	EA	1	BG	12	12	12	Yes	1
15045	15045	12 Cubic Inch Junction Box: 1/2" and 3/4" Knockout Combo	EA	1	BX	12	12	12	Yes	6
15046	15046	12 Cubic Inch Junction Box: 1/2" Knockouts	EA	1	BX	12	12	12	Yes	6
15047	15047	12 Cubic Inch Junction Box: 3/4" Knockouts	EA	1	BX	12	12	12	Yes	6
15049	15049	19 Cubic Inch Junction Box: 3/4" Knockouts	EA	1	BX	12	12	12	Yes	6
15246	15246	12 Cubic Inch SPIDERBOX Junction Box: 1/2" Knockouts	EA	1	BX	12	12	12	Yes	6
15247	15247	12 Cubic Inch SPIDERBOX Junction Box: 3/4" Knockouts	EA	1	BX	12	12	12	Yes	6
16500	16500	Porcelain Lamp Holder: Keyless, 4-Terminal	EA	1	BX	48	48	48	Yes	33
16502	16502	Porcelain Lamp Holder: Pull Chain	EA	1	BX	48	48	48	Yes	35
16514	16514	Porcelain Lamp Holder: Pull Chain and 15 AMP Receptacle	EA	1	BX	48	48	48	Yes	40

- Note:** 1. Junction boxes include screws to affix the lamp holder to the junction box.
2. Plastic Lamp Holders are NOT suitable for this application and will VOID the 1-Year Warranty!

WARNING: EPCO Lamp Holders Must Be Installed in Accordance with the following 2017 National Electric Code Articles that state:

Where the wiring method is conduit, tubing, Type AC cable, or other cables, a box or conduit body shall be installed at each conductor splice point, outlet point, switch point, junction point, termination point, or pull point, unless otherwise permitted in NEC 300.15(A).

In addition, Article 502.130(2) requires luminaires for fixed lighting shall be provided with enclosures that are dust tight or otherwise identified for the location as well as protected from physical damage by suitable guards for areas described in Article 547.1(A)(B). See example shown above.

If the Contractor has taken care to install the porcelain lamp holder(s) in the proper manner as described and shown above and believes the lamp holder is defective, and wants to file a warranty claim, EPCO will require an "Affidavit of Inspection" from the Contractor's local Electrical Inspector to validate the defined installation procedure. This document is intended to protect the integrity of the company (EPCO) and the Distributor.

FIXTURE WHIPS

We are the leading American manufacturer of fixture whips for the electrical construction industry. Our pre-wired armored cable fixture whips are factory fabricated wiring assemblies typically used for lighting and power distribution in commercial buildings.

Our Fixture Whips consist of flexible metal conduit (FMC), .375" (3/8") and .5" (1/2") trade sizes and meet all requirements of the 2017 National Electrical Code (NEC), Article 348. These pre-assembled Fixture Whips provide an excellent mechanical protection and a cost-effective, reliable installation. The connectors used are designed to simplify the connection to metallic junction boxes and luminaires. Typical applications include both new and remodeled commercial buildings, industrial facilities, shopping centers, hotels, as well as health care, educational and recreational facilities.

ADVANTAGES FOR THE CONTRACTOR

- A cost-effective and efficient alternative to traditional labor-intensive pipe and wire installation methods.
- Significantly reduces installation time to connect branch circuit power distribution and lighting systems.
- Fixture Whip accessory products are available for the contractor to expedite and facilitate installation.
- We can also build "custom" labor-saving Fixture Whips to the contractor's specifications. Please review page 56 for more specific information.

WHY CONTRACTORS USE UL LISTED EPCO FIXTURE WHIPS

- 100% of our Fixture Whips are assembled in our facility using UL Listed or UL Recognized components.
- A UL label attached to every Fixture Whip is an immediate identifier to the electrical inspector and contractor that our fixture whips have been inspected at the factory, listed by UL (File Number E87199) and comply with the NEC.
- Permitted for use by virtually all local building codes and approved by electrical inspectors in the majority of municipalities across the U.S.
- We provide product liability insurance as additional protection in the event of product defects that may cause a liability to the contractor.

The table to the right shows the maximum number of insulated conductors in 3/8 inch flexible metal conduit.

Column A = With fitting inside conduit

Column B = With fitting outside conduit

In addition, one covered or bare equipment grounding conductor of the same size shall be permitted (per the 2017 NEC, Table 348.22).

WIRE SIZE (AWG)	WIRE TYPES TFN AND THHN	
	A	B
18	5	8
16	4	6
14	3	4
12	2	3
10	1	1

ILLUMINATION CONTROL FIXTURE WHIPS

Our Illumination Control Fixture Whip (ICFW) is an integral component for illumination and control of all lighting systems. The ICFW can be used in new or retrofit construction for lighting systems operating at 120/277 VAC, meets all UL and NEC standards for combining power and lighting circuits with Class 2 or Class 3 control circuits within the same fixture whip, and is the cost-effective solution that saves the contractor time and labor when compared to buying and terminating expensive five conductor MC cable or making a homemade solution at the job site.

The ICFW is easily integrated into the architecture of a building using LED luminaires or fluorescent luminaires with dimming ballast and digital controls to:

- Optimize lighting at all times when used with an independent room controller for daylight harvesting as an energy management solution to reduce energy consumption.
- Operate in compliance with "timed" daily personnel and warehouse schedules.
- Control lighting operations used in combination with occupancy sensors for commercial and industrial applications.

BENEFITS

- UL Listed. File Number E87199.
- Meets the requirements of the 2017 National Electrical Code, Article 300.3(C)(1), Section 725.136(I)(1), 725.139(A) through (D)(1) and California Title 24 Lighting Controls, Articles 130.1(A)(B)(C)(D)(E).
- Meets UL and NEC Articles for combining Power / Lighting Circuits and the Class 2 or Class 3 Control Circuits all within the same Fixture Whip.
- Easy to install and wire. Installation is familiar to electrical contractors and is less prone to installation error.

How Does It Differ From EPCO's Standard 3/8" or 1/2" Fixture Whip?

EPCO's Standard Fixture Whip is intended to exclusively connect the Line Voltage Conductors of an LED Driver or Ballast to the incoming Power Conductors within an Electrical Junction Box (Class 1 Circuit).

Why is it Necessary to have a Different Fixture Whip Configuration than our Standard Whip when a Luminaire will Utilize Wireless Lighting Controls?

- Wireless Lighting Controls Use Relay Modules that can be attached to the outside of an electrical junction box with a nipple.
- The connection(s) of the low voltage conductors from the dimmable ballast or LED driver are intended to go through the Junction Box, and through the nipple and into the Lighting Control Relay Module to receive controller commands.
- When the Electrical Contractor wants to use a single pre-fabricated Fixture Whip to control a luminaire with control features.

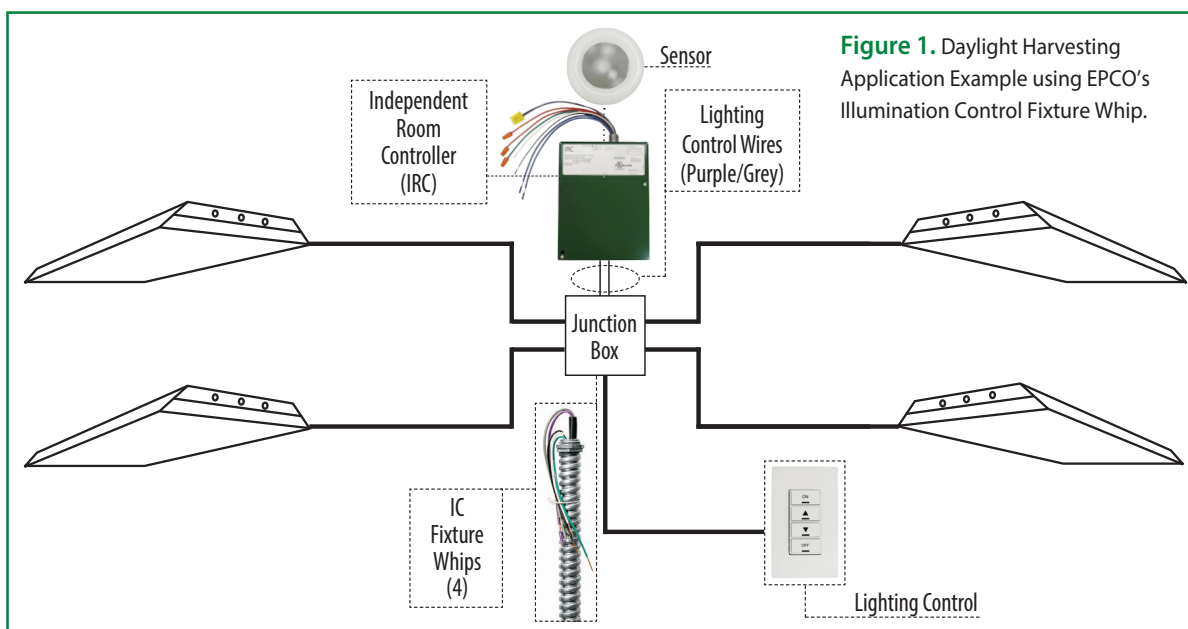
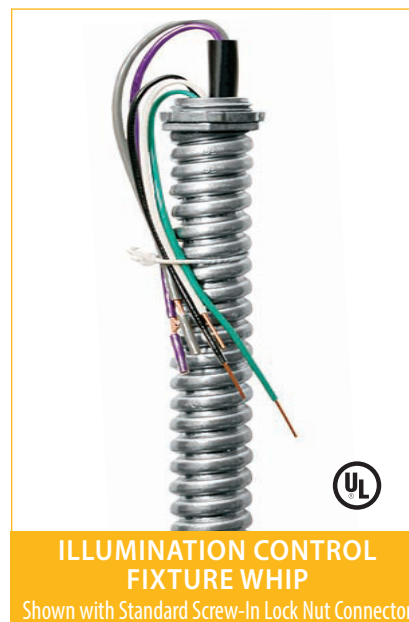


Figure 1. Daylight Harvesting Application Example using EPCO's Illumination Control Fixture Whip.

120 VOLT ILLUMINATION CONTROL FIXTURE WHIP PART NUMBERS

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Stranded Wire Screw-In Fixture Whips - 1/2" (.5") Conduit										
EPW1262-1/2-IC	84010	3-12 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	292
EPW1463-1/2-IC	84012	3-14 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	282
EPW1464-1/2-IC	84013	4-14 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	282
EPW1663-1/2-IC	84016	3-16 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	277
EPW1664-1/2-IC	84017	4-16 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	272
EPW1863-1/2-IC	84020	3-18 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	270
EPW1864-1/2-IC	84021	4-18 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	277
Solid Wire Screw-In Fixture Whips - 1/2" (.5") Conduit										
EPW1263S-1/2-IC	84011	3-12 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	292
EPW1463S-1/2-IC	84014	3-14 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	282
EPW1464S-1/2-IC	84015	4-14 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	282
EPW1663S-1/2-IC	84018	3-16 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	277
EPW1664S-1/2-IC	84019	4-16 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	272
EPW1863S-1/2-IC	84022	3-18 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	270
EPW1864S-1/2-IC	84023	4-18 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	277
Stranded Wire Snap-In Fixture Whips - 1/2" (.5") Conduit										
EPW1263AD-1/2-IC	84024	3-12 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	292
EPW1463AD-1/2-IC	84026	3-14 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	282
EPW1464AD-1/2-IC	84027	4-14 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	282
EPW1663AD-1/2-IC	84030	3-16 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	277
EPW1664AD-1/2-IC	84031	4-16 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	272
EPW1863AD-1/2-IC	84034	3-18 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	270
EPW1864AD-1/2-IC	84035	4-18 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	277
Solid Wire Snap-In Fixture Whips - 1/2" (.5") Conduit										
EPW1263SAD-1/2-IC	84025	3-12 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	292
EPW1463SAD-1/2-IC	84028	3-14 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	282
EPW1464SAD-1/2-IC	84029	4-14 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	282
EPW1663SAD-1/2-IC	84032	3-16 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	277
EPW1664SAD-1/2-IC	84033	4-16 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	272
EPW1863SAD-1/2-IC	84036	3-18 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	270
EPW1864SAD-1/2-IC	84037	4-18 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	277

Note: All Illumination Control Fixture Whips include two (2) 16 AWG Jacketed Control Wires — Purple and Grey.

277 VOLT ILLUMINATION CONTROL FIXTURE WHIP PART NUMBERS

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Stranded Wire Screw-In Fixture Whips - 1/2" (.5") Conduit										
EPW1263-1/2-BGG-IC	84038	3-12 AWG Stranded Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	292
EPW1463-1/2-BGG-IC	84042	3-14 AWG Stranded Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	282
EPW1464-1/2-BOGG-IC	84046	4-14 AWG Stranded Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	282
EPW1663-1/2-BGG-IC	84050	3-16 AWG Stranded Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	277
EPW1664-1/2-BOGG-IC	84054	4-16 AWG Stranded Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	272
EPW1863-1/2-BGG-IC	84058	3-18 AWG Stranded Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	270
EPW1864-1/2-BOGG-IC	84062	4-18 AWG Stranded Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	277

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

277 VOLT ILLUMINATION CONTROL FIXTURE WHIP PART NUMBERS (CONTINUED)

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Solid Wire Screw-In Fixture Whips - 1/2" (.5") Conduit										
EPW1263S-1/2-BGG-IC	84040	3-12 AWG Solid Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	292
EPW1463S-1/2-BGG-IC	84044	3-14 AWG Solid Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	282
EPW1464S-1/2-BOGG-IC	84048	4-14 AWG Solid Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	282
EPW1663S-1/2-BGG-IC	84052	3-16 AWG Solid Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	277
EPW1664S-1/2-BOGG-IC	84056	4-16 AWG Solid Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	272
EPW1863S-1/2-BGG-IC	84060	3-18 AWG Solid Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	270
EPW1864S-1/2-BOGG-IC	84064	4-18 AWG Solid Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	277
Stranded Wire Snap-In Fixture Whips - 1/2" (.5") Conduit										
EPW1263AD-1/2-BGG-IC	84039	3-12 AWG Stranded Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	292
EPW1463AD-1/2-BGG-IC	84043	3-14 AWG Stranded Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	282
EPW1464AD-1/2-BOGG-IC	84047	4-14 AWG Stranded Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	282
EPW1663AD-1/2-BGG-IC	84051	3-16 AWG Stranded Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	277
EPW1664AD-1/2-BOGG-IC	84055	4-16 AWG Stranded Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	272
EPW1863AD-1/2-BGG-IC	84059	3-18 AWG Stranded Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	270
EPW1864AD-1/2-BOGG-IC	84063	4-18 AWG Stranded Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	277
Solid Wire Snap-In Fixture Whips - 1/2" (.5") Conduit										
EPW1263SAD-1/2-BGG-IC	84041	3-12 AWG Solid Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	292
EPW1463SAD-1/2-BGG-IC	84045	3-14 AWG Solid Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	282
EPW1464SAD-1/2-BOGG-IC	84049	4-14 AWG Solid Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	282
EPW1663SAD-1/2-BGG-IC	84053	3-16 AWG Solid Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	277
EPW1664SAD-1/2-BOGG-IC	84057	4-16 AWG Solid Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	272
EPW1863SAD-1/2-BGG-IC	84061	3-18 AWG Solid Wire: 6-FT - Brown, Grey, Green	EA	1	BRL	100	100	10	Yes	270
EPW1864SAD-1/2-BOGG-IC	84065	4-18 AWG Solid Wire: 6-FT - Brown, Orange, Grey, Green	EA	1	BRL	100	100	10	Yes	277

Note: All Illumination Control Fixture Whips include two (2) 16 AWG Jacketed Control Wires — Purple and Grey.

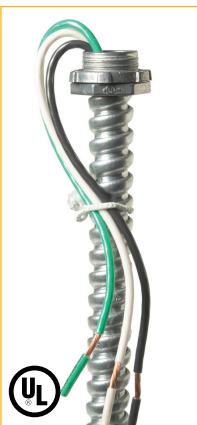
STANDARD FIXTURE WHIPS — COMMONALITIES

- UL Listed as a complete wire assembly that complies with the 2017 National Electrical Code: Articles 348.20(A)(2), 348.22, 410.117(A), (B) and (C), and 410.137(C). File #E87199.
- Manufactured using UL Listed or UL recognized components.
- Stranded and Solid THHN Conductors.
- Packaging — 30 per Carton or 100 in a fiber drum.

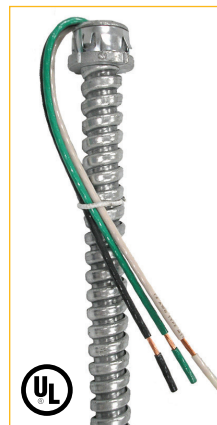
Note: Specify packaging requirements when placing your order. Add the "C" suffix to indicate 30 Fixture Whips per Carton.

All stranded and solid wire conductors are stripped 5/8" (.625") from the end of the conductor and securely tied to prevent damage to the conductors.

We manufacture Fixture Whips for 277 Volt applications. Contact our Inside Sales Department (sales@engproducts.com or 800.336.1976) for more specific information.



Die Cast Screw-In Connector



Die Cast Snap-In Connector



Polycarbonate Snap-In Connector

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

STANDARD FIXTURE WHIP PART NUMBERS

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Stranded Wire Fixture Whips With Die Cast Screw-In Connectors - 3/8" (.375") Conduit										
EPW1263	10315	3-12 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	190
EPW1462	10303	2-14 AWG Stranded Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	160
EPW1463	10307	3-14 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	170
EPW1464	10308	4-14 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	180
EPW1662	10300	2-16 AWG Stranded Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1663	10301	3-16 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	165
EPW1664	10302	4-16 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	175
EPW1862	10297	2-18 AWG Stranded Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1863	10298	3-18 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	160
EPW1864	10299	4-18 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	170
Solid Wire Fixture Whips With Die Cast Screw-In Connectors - 3/8" (.375") Conduit										
EPW1263S	10337	3-12 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	190
EPW1462S	10333	2-14 AWG Solid Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	160
EPW1463S	10334	3-14 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	170
EPW1464S	10335	4-14 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	180
EPW1662S	10330	2-16 AWG Solid Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1663S	10331	3-16 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	165
EPW1664S	10332	4-16 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	175
EPW1862S	10327	2-18 AWG Solid Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1863S	10328	3-18 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	160
EPW1864S	10329	4-18 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	170
Stranded Wire Fixture Whips With Die Cast Screw-In Connectors - 1/2" (.5") Conduit										
EPW1263-1/2	11600	3-12 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	186
EPW1264-1/2	10286	4-12 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	195
EPW1463-1/2	10309	3-14 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	175
EPW1464-1/2	10313	4-14 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	180
Solid Wire Fixture Whips With Die Cast Screw-In Connectors - 1/2" (.5") Conduit										
EPW1263S-1/2	10314	3-12 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	186
EPW1264S-1/2	10289	4-12 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	195
EPW1463S-1/2	10575	3-14 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	175
EPW1464S-1/2	10577	4-14 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	180
Stranded Wire Fixture Whips With Die Cast Snap-In Connectors - 3/8" (.375") Conduit										
EPW1263AD	10556	3-12 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	190
EPW1264AD	10558	4-12 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	170
EPW1462AD	10560	2-14 AWG Stranded Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	160
EPW1463AD	10369	3-14 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	170
EPW1464AD	10442	4-14 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	180
EPW1662AD	10566	2-16 AWG Stranded Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1663AD	10517	3-16 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	165
EPW1664AD	10568	4-16 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	175
EPW1862AD	10569	2-18 AWG Stranded Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1863AD	10281	3-18 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	160
EPW1864AD	10280	4-18 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	170

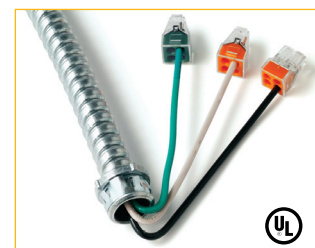
UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

STANDARD FIXTURE WHIP PART NUMBERS (CONTINUED)

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Solid Wire Fixture Whips With Die Cast Snap-In Connectors - 3/8" (.375") Conduit										
EPW1263SAD	10557	3-12 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	190
EPW1264SAD	10559	4-12 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	170
EPW1462SAD	10561	2-14 AWG Solid Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	160
EPW1463SAD	10450	3-14 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	170
EPW1464SAD	10529	4-14 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	180
EPW1862SAD	10570	2-18 AWG Solid Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1863SAD	10367	3-18 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	160
EPW1864SAD	10368	4-18 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	170
Stranded Wire Fixture Whips With Polycarbonate Snap-In Connectors - 3/8" (.375") Conduit										
EPW1263A	10319	3-12 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	190
EPW1463A	10317	3-14 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	170
EPW1464A	10326	4-14 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	180
EPW1662A	10323	2-16 AWG Stranded Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1663A	10324	3-16 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	165
EPW1664A	10325	4-16 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	175
EPW1862A	10320	2-18 AWG Stranded Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	155
EPW1863A	10321	3-18 AWG Stranded Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	160
EPW1864A	10322	4-18 AWG Stranded Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	170
Solid Wire Fixture Whips With Polycarbonate Snap-In Connectors - 3/8" (.375") Conduit										
EPW1262SA	10347	2-12 AWG Solid Wire: 6-FT - Black, White	EA	1	BRL	100	100	10	Yes	175
EPW1263SA	10348	3-12 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	190
EPW1463SA	10345	3-14 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	170
EPW1464SA	10346	4-14 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	180
EPW1663SA	10342	3-16 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	165
EPW1664SA	10343	4-16 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	175
EPW1863SA	10339	3-18 AWG Solid Wire: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	160
EPW1864SA	10340	4-18 AWG Solid Wire: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	170

QUIKWHIP FIXTURE WHIPS

- UL Listed as a complete wire assembly that complies with the 2017 National Electrical Code: Articles 348.20(A)(2), 348.22, 410.117(A), (B) and (C), and 410.137(C). File #E87199.
- Pre-attached connectors add speed and dependability.
- No tools required! A cost-effective solution that eliminates lock nuts and wire nuts.
- Average Time Savings: 45% or up to three (3) minutes per luminaire installation.
- Approximate "installed" cost savings per luminaire: \$2.00 - \$3.00.
- Solid or Stranded THHN Conductors enclosed in 6-feet of 3/8" (.375") Flexible Metal Conduit — Standard.



QuikWhip Fixture Whips Part Number Reference Example: EPW1864SADP2-HNG

18 = Wire Gauge; 6 = Length (in feet); 4 = Wires; S = Solid Wire; AD = Die Cast Snap-In Connector; P = Pushwire Style Connector; 2 = Each End.

WAGO Connectors will be pre-attached to each end of the QuikWhip on the HOT, Neutral and Ground wires. HNG = Hot/Neutral/Ground.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Stranded Wire QuikWhips										
EPW1463ADP2-HNG	10531	3-14 AWG: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	171
EPW1464ADP2-HNG	10532	4-14 AWG: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	171
Solid Wire QuikWhips										
EPW1263SADP1-HN	10548	3-12 AWG: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	191
EPW1263SADP2-HNG	10535	3-12 AWG: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	191
EPW1863SADP2-HNG	10533	3-18 AWG: 6-FT - Black, White, Green	EA	1	BRL	100	100	10	Yes	161
EPW1864SADP2-HNG	10534	4-18 AWG: 6-FT - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	171

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

FIXTURE WHIPS

RETROFIT FIXTURE WHIPS WITH DIE CAST SCREW-IN CONNECTORS

RETROFIT FIXTURE WHIPS WITH DIE CAST SCREW-IN CONNECTORS

- UL Listed as a complete wire assembly that complies with the 2017 National Electrical Code: Articles 348.20(A)(2), 348.22, 410.117(A), (B) and (C), and 410.137(C). File #E87199.
- Labor saving Fixture Whips that expedite the installation process when contractors upgrade existing fluorescent luminaires with new energy saving ballast.
- All stranded and solid wire conductors are stripped 5/8" (.625") from the end of the conductor and securely tied to prevent damage to the conductors and eliminate lost lock nuts.
- Includes Die Cast Screw-In Connectors on each end.



Meets the requirements of the 2017 National Electrical Code: Article 410.137(C) as follows:

Wired luminaire sections are paired, with a ballast(s) supplying a lamp or lamps in both. For interconnection between paired units, it shall be permissible to use metric designator 12 (trade size 3/8") flexible metal conduit in lengths not exceeding 7.5 m (25-ft) in conformance with Article 348. Luminaire wire operating at line voltage, supplying only the ballast(s) of one of the paired luminaires, shall be permitted in the same raceway as the lamp supply wires of the paired luminaires. See Figure 1.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Stranded Wire Retrofit Fixture Whips										
EPW18103	10400	3-18 AWG Stranded Wire: 3/8" Conduit, 10-FT Length - Black, White, Green	EA	1	BRL	100	100	10	Yes	133
EPW18104	10402	4-18 AWG Stranded Wire: 3/8" Conduit, 10-FT Length - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	142
Solid Wire Retrofit Fixture Whips										
EPW18103S	10401	3-18 AWG Solid Wire: 3/8" Conduit, 10-FT Length - Black, White, Green	EA	1	BRL	100	100	10	Yes	133
EPW18104S	10403	2-16 AWG Solid Wire: 3/8" Conduit, 10-FT Length - Black, Red, White, Green	EA	1	BRL	100	100	10	Yes	142

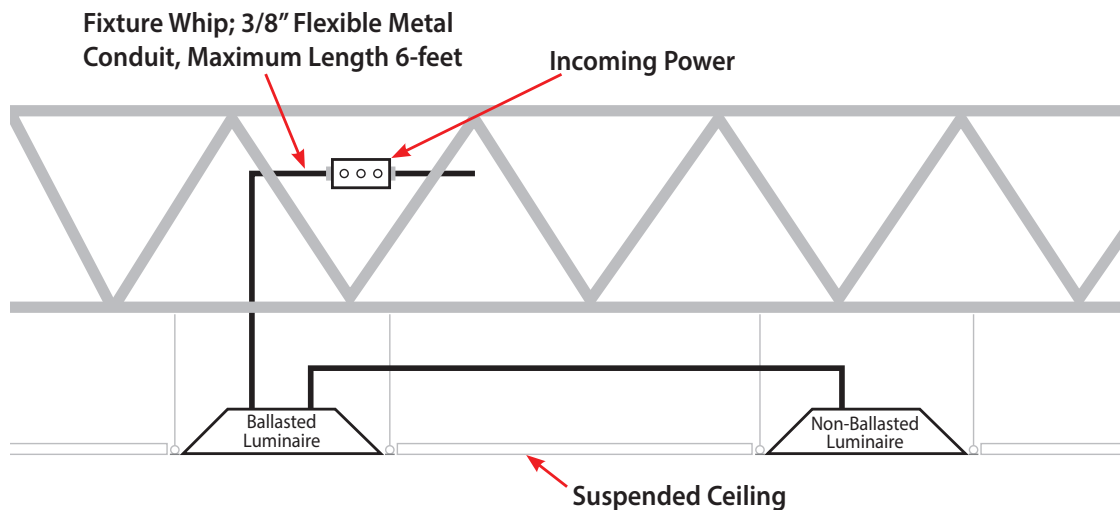


Figure 1: Allowable application for a Flexible Metal Conduit (FMC) Fixture Whip with a maximum 25-foot restriction.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

DON'T SEE WHAT YOU WANT? LET EPCO'S CUSTOM CAPABILITIES HELP YOU!

We are the industry leader in the development and manufacturer of fixture and power whips with over 300+ configurations immediately available.

We can customize and cost effectively produce any fixture whip or power whip in any length, wire gauge size, with your choice of steel or liquid tight conduit.

Our advanced engineering capabilities enable us to easily develop your fixture whip or power whip to connect and energize any lighting system luminaires or device to meet your application requirements.

Example: Our power whips are used in the lower panels of cubicles and workstations that deliver electricity to computers, fax machines, task lighting, telephone systems, and other devices.

See Page 56 for our Custom Fixture Whip Order Form.

Contact your local EPCO Sales Representative (See Page 93) or EPCO Inside Sales at sales@engproducts.com or 800.336.1976 for more information.



Typical Applications for Steel or Liquid Tight Conduit

- Modular Office Paneling
- Portable Buildings
- Parking Booths
- Airport Taxi Dispatch Offices
- Security Guard Houses
- Cashier Booths
- Clean Rooms
- Kiosks
- Toll Booths
- Ticket Booths
- Airport Rental Car Offices
- And more...

NOTES

FIXTURE WHIPS

CUSTOM FIXTURE WHIP ORDER FORM

CUSTOM FIXTURE WHIP ORDER FORM

We will build "Labor Saving" Fixture Whips to your specifications. Please use the information below to specify your non-Catalog Custom Fixture Whip requirements. Complete this form and fax to:

Engineered Products Company, Attention: Inside Sales Department, FAX: 952.767.8786

If you need a quote on more than one Custom Fixture Whip, please complete a separate form for each variation.

Distributor: _____ Contact: _____

Address: _____ City: _____ State/Zip: _____

Sales Agency: _____ Contact Name: _____ Target Price (\$): _____

Wire (TFFN or THHN): ☐ Solid ☐ Stranded

Wire Gauge: ☐ 12 ☐ 14 ☐ 16 ☐ 18

Wire Lead Length: ☐ 6-inch ☐ 12-inch ☐ Other (specify) _____

Connector Type: ☐ Left End ☐ Right End (specify) _____

Select a connector type (number) for each Fixture Whip from the Connector Reference Guide shown below.

Wire Colors: ☐ Black ☐ White ☐ Red

☐ Green ☐ Blue ☐ Grey

☐ Brown ☐ Purple ☐ Pink

☐ Orange ☐ Yellow ☐ Other* (specify): _____

Conduit Material: ☐ 3/8-inch ☐ 1/2-inch (Flexible Metal, Steel)

*Liquid Tight Conduit: ☐ 3/8-inch ☐ 1/2-inch

Insulated Throat: ☐ Yes ☐ No

Conduit Length:

☐ 6-Foot ☐ 8-Foot ☐ 10-Foot ☐ 12-Foot ☐ Other* _____ *require longer lead times

Quantity Needed: _____ Requested Shipping Date: _____

Description: _____

If your application requires a Connector other than what is shown in the Reference Guide, please indicate the following:

Connector Type: _____

Manufacturer: _____

Part Number: _____

Push-in Wire Connectors: Select wire color AND choose which end requires a Push-in Wire Connector:



☐ Left End ☐ Right End ☐ Black

☐ Left End ☐ Right End ☐ Green

☐ Left End ☐ Right End ☐ Brown

☐ Left End ☐ Right End ☐ Orange

☐ Left End ☐ Right End ☐ White

☐ Left End ☐ Right End ☐ Blue

☐ Left End ☐ Right End ☐ Purple

☐ Left End ☐ Right End ☐ Yellow

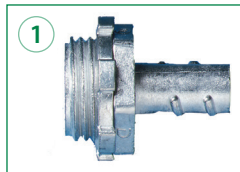
☐ Left End ☐ Right End ☐ Red

☐ Left End ☐ Right End ☐ Grey

☐ Left End ☐ Right End ☐ Pink

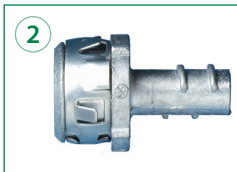
CONNECTOR REFERENCE GUIDE

Common connectors used on pre-made assembly.



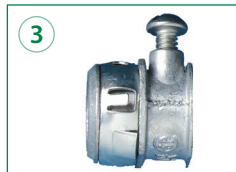
Size: 3/8": P/N E00-001-000
1/2": P/N E00-026-000

Type: Screw-in
Material: Die Cast
Insulated: Yes or No (circle one)

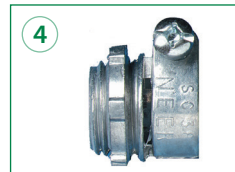


Size: 3/8": P/N E00-003-000
1/2": P/N E00-005-000

Type: Screw-in/Snap-in
Material: Die Cast
Insulated: Yes or No (circle one)



Size: 3/8": P/N E00-003-001
Type: Set Screw, Snap-in
Material: Die Cast
Insulated: No



Size: 3/8": P/N E00-041-000
1/2": P/N E00-042-000
Type: Set Screw, Squeeze
Material: Die Cast
Insulated: No



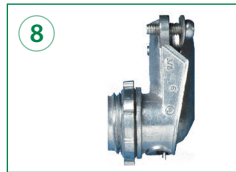
Size: 3/8": P/N E00-002-000
1/2": P/N E00-013-000
Type: Exterior, Snap-in
Material: Plastic w/Steel
Insulated: Yes



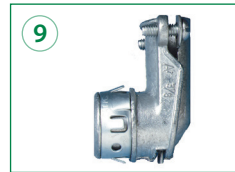
Size: 3/8": P/N E00-041-002
1/2": P/N E00-042-002
Type: Set Screw, Squeeze
Material: Steel
Insulated: 3/8": No
1/2": Yes



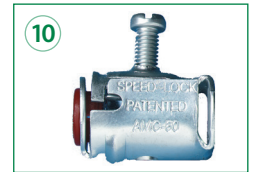
Size: 3/8": P/N E00-054-000
1/2": P/N E00-055-000
Type: Set Screw, Squeeze
Material: Steel
Insulated: Yes



Size: 3/8": P/N E00-007-000
1/2": P/N E00-010-000
Type: Set Screw, 90°
Material: Die Cast
Insulated: Yes or No (circle one)



Size: 3/8": P/N E00-015-000
1/2": P/N E00-005-001
Type: Snap-in, 90°
Material: Die Cast
Insulated: No



Size: 3/8": P/N E00-003-003
1/2": P/N E00-004-003
Type: Speed Lock Style, Snap-in
Material: Steel
Insulated: Yes

***Note:** Connectors are not sold separately. Other connectors, not listed, can be specified for your custom fixture whip. Contact our EPCO Inside Sales Department (800.336.1976 or sales@engproducts.com) for other connector options.



TUBE GUARDS

Make us your resource for Standard and UV Filtering Fluorescent Tube Guards! Their primary function is to provide superior protection against broken glass and sparks that can result when fluorescent lamps shatter.

Our Tube Guards are “add-on” polycarbonate sleeves that are held in place around the linear fluorescent lamp by two (2) plastic end caps. We always recommend using the end caps to maintain an air space between the fluorescent lamp wall and the inside of the tube guard when placed around the lamp.

Note: It is extremely important to properly install our tube guards utilizing the supplied end caps. Improperly installed tube guards that come into direct contact with the fluorescent lamp wall may cause premature lamp failure.

The average temperature to manufacture polycarbonate tube guards is approximately 500°F (260°C). While some manufacturers might use recycled polycarbonate material for tube guard production, we only use virgin polycarbonate material for the best stability and long-term reliability. This means the melting point for our tube guards is much higher and lowers the probability of them melting or deforming at the end of the fluorescent lamp's life. When the lamp and ballast system is wired correctly, the lamp and tube guard combination will function satisfactorily during normal lamp life. However, toward the end of the lamp's life, the ends of the lamp create excessive heat that may cause the tube guard to heat up, distort and discolor. We always recommend using Heat Sink Screens (P/N: 17893 — T5 HD, 17800 — T8, 17860 — T12) during the installation of new tube guards or when retrofitting and reusing tube guards.

ADVANTAGES FOR THE CONTRACTOR, FACILITY MANAGER AND BUILDING OWNER

- Standard Tube Guards satisfy OSHA, FDA and USDA requirements for food processing, commercial businesses and industrial plants.
- UV Filtering Tube Guards screen out harmful ultraviolet light emissions.

WHY CONTRACTORS USE EPCO TUBE GUARDS

- Our Standard and UV Filtering Tube Guards are always “in-stock” and available for immediate shipping.
- End caps are included with all Tube Guards.
- Easy to install without the use of tools.
- Efficient, cost-effective, and provides maximum protection against fluorescent lamp breakage.

TUBE GUARDS

STANDARD TUBE GUARDS

STANDARD TUBE GUARDS

The Standard Tube Guard is a light stabilized polycarbonate and has 0% transmittance below 365 nanometers (Clear Tube Guards only). Available Colors: Clear, Amber, Red, Green, Yellow and Blue. Available Sizes: T5, T8, and T12.

- An efficient economical solution where fluorescent lamp breakage would be hazardous to personnel, product, equipment or animals.
- Slip over fluorescent lamps to retain shattered glass and control the release of mercury vapor and phosphorescent material.
- Constructed of unbreakable lexan polycarbonate.
- "Cut-to-order" custom lengths are also available. Contact our Inside Sales Department (800.336.1976 or sales@engproducts.com) for more information.

T5 HD SERIES TUBE GUARDS

Using T5 lamps is a cost-effective lighting systems solution for a variety of reasons. Unfortunately the average T5 lamp will dissipate about 73% of its total lamp power as heat. And when this lamp is used in combination with a tube guard, that heat must be properly dissipated from the lamp.

Our T5 HD (Heat Dissipation) Series Tube Guard takes into consideration two major factors; the temperature on the inside of the tube guard, and how close the T5 lamp is actually located to the tube guard.

- Our T5 HD Series Tube Guard's larger diameter and its "vented" End Caps allow a layer of air to absorb heat from the lamp and cool it before making contact with the inside wall of the tube guard. This results in a 25°F (-4°C) temperature drop.*
- The larger diameter of the T5 HD Series Tube Guard allows it to accommodate Heat Sink Screens to control and distribute heat, in addition to lowering the temperatures over a larger area on the end of the tube guard.

Note: We strongly recommend using Heat Sink Screens with our T5 HD Series Tube Guards. Part Numbers 17185 and 17186 arrive with the Heat Sink Screens built into the Tube Guard. See photo to the right below.

- The combination of the T5 HD Series Tube Guard, "vented" End Caps, and Heat Sink lower the inside temperature of the tube guard approximately 30°F (-1°C).**
- Together, these components provide a unique operational advantage over other competitors T5 tube guards and still fits all T5 lamp applications.

TEMPERATURE TESTING

CONFIGURATION	TEMPERATURE*
Competitors T5 Tube Guard	215°F (102°C)
T5 HD Series Tube Guard and "Vented" End Caps	190°F (88°C)*
T5 HD Series Tube Guard, "Vented" End Caps and Heat Sink Screens	185°F (85°C)**

***Note:** The temperature is measured on the inside surface of the Tube Guard. The ambient testing temperature was 72°F (22°C) using a T5 F54 HO Lamp.

Fast, Efficient and Repeatable Results

Heat Sink Screens help distribute excessive heat on both ends of the fluorescent lamp. But when installing a large number of tube guards and heat sink combinations, time is money.

High volume installers can now reduce their installation time by using our T5 HD Series Tube Guard with "pre-installed" Heat Sink Screens. In addition to saving time and money, T5 HD Series Tube Guards with "pre-installed" Heat Sink Screens provide a convenient and economical solution to expedite the installation by eliminating the process of having the contractor pre-roll two (2) Heat Sink Screens (per tube guard).

Simply insert the lamp into the T5 HD Series Tube Guard, insert the "vented" end cap on each end of the tube guard and install the "tubed" lamp into the luminaire.



STANDARD TUBE GUARDS

TYPICAL APPLICATIONS:

- Food Processing Facilities
- Commercial Kitchens
- Grocery Stores
- Laundries
- Industrial Facilities
- Storage Buildings
- Pedestrian and Road Tunnels
- Elevator Shafts
- Refrigerators and Freezers
- Locker Rooms
- And more...

T5 HD Series Tube Guard with Built-In Heat Sink

T5 HD Series "Vented" End Cap

Stopper

Part Numbers 17185 and 17186

Note: T5 HD Series Tube Guards, Part Numbers 17185 and 17186, are bundled with the T5 HD Heat Sink Screens built into the Tube Guard as shown above.

STANDARD TUBE GUARDS

YELLOW TUBE GUARDS — How do they work?

Insects and humans have different visual perceptions. Light sources that radiate ultraviolet energy and blue light are most attractive to insects. Light sources that insects have a difficult time seeing are “yellow” hues in the color spectrum. Our yellow tube guards will minimize the number of insects.

TYPICAL APPLICATIONS

- Commercial businesses that maintain night-time operations such as gas stations, fast food restaurants, etc.
- Commercial food preparation and serving areas
- Parking lots loading areas
- Airport, Train and Bus Stations
- Building entrances
- Decks and patios

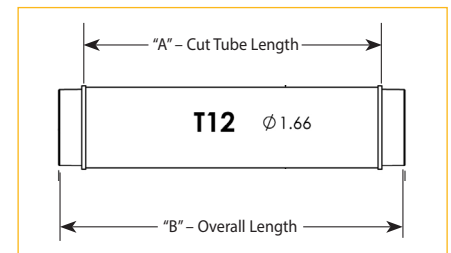
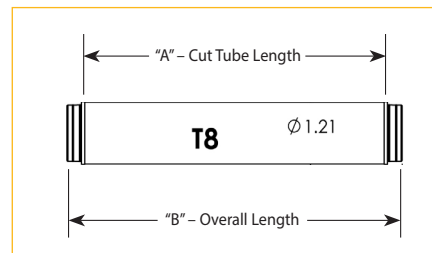
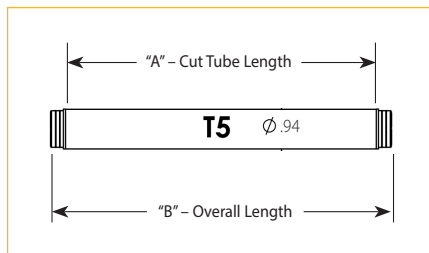


STANDARD AND UV FILTERING TUBE GUARD DIMENSIONS

T5 HD SERIES TUBE GUARDS		
DIM. “A”	DIM. “B”	NOMINAL LENGTH
44.68	45.27	4'

T8 TUBE GUARDS		
DIM. “A”	DIM. “B”	NOMINAL LENGTH
46.38	47.10	4'
68.38	69.10	6'
92.38	93.10	8'

T12 TUBE GUARDS		
DIM. “A”	DIM. “B”	NOMINAL LENGTH
45.97	47.10	4'
67.97	69.10	6'
91.97	93.10	8'



Note: Dimension “B” includes End Caps.

STANDARD TUBE GUARD END CAPS (BLACK)

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
17103	17103	Standard End Caps: for T5 HD Series, “Vented”	BG	48	BG	0	0	48	Yes	1
17100	17100	Standard End Caps: for T8 Tube Guard	BG	48	BG	0	0	48	Yes	1
17101	17101	Standard End Caps: for T12 Tube Guard	BG	48	BG	0	0	48	Yes	1

Note: End Caps for T5 HD Series, T8 and T12 Tube Guards fit inside the Tube Guard.



UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
4-Foot T5 HD Series Tube Guard										
17183*	17183	Clear Polycarbonate: with "Vented" Black End Caps	EA	1	BX	48	48	48	Yes	6
17184*	17184	Clear Polycarbonate: with "Vented" Black End Caps	EA	1	BX	120	120	120	Yes	16
17194†	17194	Amber Polycarbonate: with "Vented" Black End Caps	EA	1	BX	24	24	24	Yes	4
17195†	17195	Red Polycarbonate: with "Vented" Black End Caps	EA	1	BX	24	24	24	Yes	4
17196†	17196	Green Polycarbonate: with "Vented" Black End Caps	EA	1	BX	24	24	24	Yes	4
17197†	17197	Blue Polycarbonate: with "Vented" Black End Caps	EA	1	BX	24	24	24	Yes	4
17199†	17199	Yellow Polycarbonate: with "Vented" Black End Caps	EA	1	BX	24	24	24	Yes	4
4-Foot T5 HD Series Tube Guard with Built-In Heat Sink										
17185**	17185	Clear Polycarbonate: with "Vented" Black End Caps and built-in Heat Sink	EA	1	BX	48	48	48	Yes	7
17186**	17186	Clear Polycarbonate: with "Vented" Black End Caps and built-in Heat Sink	EA	1	BX	120	120	120	Yes	17
4-Foot T8 Tube Guard										
17000	17000	Clear Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	6
17005	17005	Amber Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	6
17010	17010	Red Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	6
17015	17015	Green Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	6
17020	17020	Blue Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	6
17025	17025	Yellow Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	6
8-Foot T8 Tube Guard										
17030	17030	Clear Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	10
17031	17031	Amber Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	10
17032	17032	Red Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	10
17033	17033	Green Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	10
17034	17034	Blue Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	10
17035	17035	Yellow Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	10
4-Foot T12 Tube Guard										
17060	17060	Clear Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	7
6-Foot T12 Tube Guard										
17040	17040	Clear Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	10
8-Foot T12 Tube Guard										
17090	17090	Clear Polycarbonate: with Black End Caps	EA	1	BX	24	24	24	Yes	10

- Note:** *1. Standard Tube Guards are sold ONLY in case quantities of 24 per Carton. We will not break case carton quantities!
The exception is the T5 HD Series — Clear, which is available in carton quantities of 48 and 120 Units (P/Ns: 17183, 17184, 17185 and 17186).
- **2. T5 HD Series Tube Guards, Part Numbers 17185 and 17186 include the built-in T5 HD Heat Sink Screens.
- †3. Indicates long lead time. Contact our Inside Sales Department (800.336.1976 or sales@engproducts.com) for more information.
4. Standard Tube Guards are not intended for use with HO or VHO Lamps! The exception is the T5 HD Series Tube Guard that is rated for use with a T5 HO Lamp.
5. Tube Guards, other than sizes and colors listed, can be special ordered. Contact our Inside Sales Department (800.336.1976 or sales@engproducts.com) for more information.



EPCO Standard Tube Guards are Made in the USA.
Complies with the American Recovery and Reinvestment Act – Buy American Provision.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

UV FILTERING TUBE GUARDS

- Our UV Filtering Tube Guards provide the basic reduction of harmful UV energy by filtering 99% of harmful UV rays up to 390 nanometers.*
- Manufactured using thin-wall high tensile and impact resistant polycarbonate material that is flexible to grasp the lamp to facilitate lamp changes; does not easily crack.
- Special UV additive filters UV rays better than acrylic materials with comparable wall thickness (0.016" wall thickness).
- Minimizes premature color shifting (fading) and deterioration that can be detrimental to food products, paper, natural and synthetic textiles, paints, coatings, wood and polymer materials, inc.
- Provides years of protection from dangerous UV light.
- Can readily be "field-cut" to length if desired.
- Manufactured to the highest quality standards.
- Sizes: T5, T8, and T12.
- Available in nominal 4-foot and 8-foot lengths.

***Note:** Tested by two (2) independent light testing laboratories.



UV FILTERING TUBE GUARDS

TYPICAL APPLICATIONS:

- Food Service
- Commercial Kitchens
- Photography Studios
- Grocery Stores
- Fabric Stores
- Movie Theaters
- Book Stores
- Libraries
- Furniture Stores
- Warehouses
- Special lighting applications where UV protection is required

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
4-Foot T5 HD Series Tube Guard										
17206	17206	Clear UV Filtering: with "Vented" Green End Caps	EA	1	BX	24	24	24	Yes	4
4-Foot T8 Tube Guard										
17201	17201	Clear UV Filtering: with Green End Caps	EA	1	BX	24	24	24	Yes	7
8-Foot T8 Tube Guard										
17202	17202	Clear UV Filtering: with Green End Caps	EA	1	BX	24	24	24	Yes	12
8-Foot T12 Tube Guard										
17204	17204	Clear UV Filtering: with Green End Caps	EA	1	BX	24	24	24	Yes	15

Note: 1. UV Filtering Tube Guards are sold ONLY in case quantities of 24 per Carton. We will not break case carton quantities.
2. UV Filtering Tube Guards are not to be used with HO or VHO fluorescent lamps! The exception is the UV Filtering T5 HD Series Tube Guard that is rated for use with a T5 HO lamp.

UV FILTERING TUBE GUARD END CAPS (GREEN)

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
17303	17303	UV Filtering End Caps: for T5 HD Series, "Vented"	BG	48	BG	0	0	48	Yes	1
17300	17300	UV Filtering End Caps: for T8 Tube Guard	BG	48	BG	0	0	48	Yes	1
17301	17301	UV Filtering End Caps: for T12 Tube Guard	BG	48	BG	0	0	48	Yes	1

Note: End Caps for T5, T8 and T12 Tube Guards fit inside the Tube Guard.



 EPCO UV Filtering Tube Guards are Made in the USA.
Complies with the American Recovery and Reinvestment Act – Buy American Provision.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

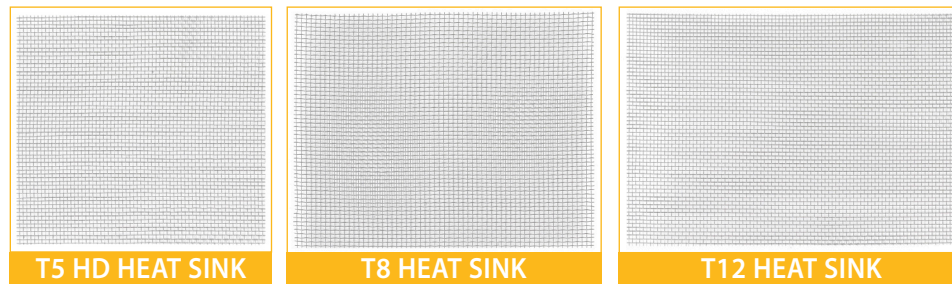
TUBE GUARDS

HEAT SINK SCREENS

HEAT SINK SCREENS

We recommend the use of Heat Sink Screens with all of our Tube Guards to aid in controlling heat that is generated by the fluorescent lamp. The primary function of our Heat Sink Screens is to distribute heat and lower the temperatures of the fluorescent lamp over a larger area at each end of the Tube Guard.

The Heat Sink Screens are available in sizes for the T5 HD Series Tube Guard, as well as T8 and T12 Tube Guards.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
17893	17893	Heat Sink Screens: for T5 HD Series Tube Guards	BG	2	BG	0	0	2	Yes	1
17800	17800	Heat Sink Screens: for T8 Tube Guards	BG	2	BG	0	0	2	Yes	1
17860	17860	Heat Sink Screens: for T12 Tube Guards	BG	2	BG	0	0	2	Yes	1

Note: Heat Sink Screens are not for use with VHO Fluorescent Lamps.

Engineered Product Company (EPCO) Standard and UV Filtering Tube Guards Comply with the following Regulations:

FDA Plant Construction and Design ... 110.20 Section B, Part 5

(5) Provide safety-type light bulbs, fixtures, skylights, or other glass suspended over exposed food in any step of preparation or otherwise protect against food contamination in case of glass breakage.

FDA Food Code Chapter 6, Section 202.11

"Light bulbs that are shielded, coated, or otherwise shatter resistant are necessary to protect exposed food, clean equipment, utensils and linens, and unwrapped single-service and single-use articles."

TITLE 21 - FOOD AND DRUGS; Chapter 1 - Food and Drug Administration Department of Health and Human Services, Subchapter B: Food for Human Consumption

Subpart B - Building and Facilities: Section 110.20 Plant and Grounds

(5) Provide adequate lighting ... and provide safety-type light bulbs, fixtures, skylights, or other glass suspended over exposed food in any step of preparation or otherwise protect against food contamination in case of glass breakage.

6-202.11 Light Bulbs, Protective Shielding

(A) Except as specified in ¶ (B) of this section, light bulbs shall be shielded, coated, or otherwise shatter-resistant in areas where there is exposed FOOD; clean EQUIPMENT, UTENSILS, and LINENS; or unwrapped SINGLE-SERVICE and SINGLE-USE ARTICLES.

Light Blocking Properties of EPCO Clear Tube Guards				
Lumens	280	289	224	236 Without Sleeve
	269	274	213	229 With Sleeve
	11	15	11	7 Difference
% Reduction Average	3.93%	5.19%	4.691%	4.25%
Material	Clear Polycarbonate			
	Extrusion grade; high viscosity; branched; UV stabilized			
	Optical Properties: Transmittance = 88% at .118" thick; 4.25% avg at .015" thick			
Lamp	F32 T8 run with Advance NBF Ballast			
	4100K			
	Tested at 126 Volts input			

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

WARNING

- It is safe to use EPCO T5, T8, or T12 Tube Guards only in conjunction with electronic high efficiency ballasts designed to prevent an over-current condition to these fluorescent lamps during use and at the lamp's "end of life" (EOL).
- We strongly recommend using EPCO Heat Sink Screens with all T5, T8, or T12 Tube Guards.
 - T5 HD Series Heat Sink Screens: Part Number 17893
 - T8 Heat Sink Screens: Part Number 17800
 - T12 Heat Sink Screens: Part Number 17860
- The Installer must ensure the electrode bi-pin base end on the T5, T8, or T12 fluorescent lamps are firmly "placed, rotated a ¼ turn, and fully seated" in the luminaire's lamp holder for maximum lamp retention.

Note: After the fluorescent lamp is installed, there should be no gap between the electrode bi-pin base end on the fluorescent lamp and the lamp holder. A gap between the electrode bi-pin base on the fluorescent lamp and lamp holder can create an "arcing" condition and cause a potential fire.
- Do not misalign the electrode bi-pin base end on the fluorescent lamp and the lamp holder! Misalignment causes a poor electrical connection and subsequent "voltage drop" between the lamp holder contacts and the bi-pins of the lamp sufficient to cause an "arcing" condition that can start a fire.
- EPCO does not recommend using its T5, T8 and T12 Tube Guards under any conditions where the surface temperature of the fluorescent lamp can or will exceed 225°F (107°C) or in "any" enclosed luminaire where normal venting is not available.
- EPCO T5, T8, or T12 Tube Guards must not be used with any lighting system that includes dimming capability where power surges or voltage spikes can cause "arcing" or an over-current condition to the lamps.
- We strongly recommend changing lamp(s) whenever there is "blackening" at the electrode bi-pin base end on the fluorescent lamp.



TEMPORARY LIGHTING

Whether the application is new or retrofit construction, high quality temporary lighting is necessary and required by OSHA for the safety and productivity of all trade workers, as well as improving the quality of the completed work. In fact, 9 out of 10 electrical contractors choose EPCO's high lumen output LED, HID, and CFL temporary lighting luminaires, as well as our 12 AWG and 14 AWG CordLights. Our temporary lighting products are well known for their reliable and durable performance in a wide range of operating temperatures, and provide the best overall value for any temporary lighting application.

LED LIGHTING TECHNOLOGY

- Provides a large amount of cleaner white light to cover a sizeable work area.
- Significant energy savings for 24 hours a day usage compared to other temporary lighting methods.
- Average rated life is 50,000 hours, minimum.
- "Instant-on", no restrike time required, no flickering.
- No ongoing lamp maintenance expenses.

TYPE-O PULSE-START LIGHTING TECHNOLOGY

- High-intensity luminaires enhance productivity and provide increased security and safety.
- Energy efficient high lumen maintenance lowers operating expenses.
- Compact size and dependable high performance lighting source.
- Reliable operation and performance in a wide range of ambient temperatures.

COMPACT FLUORESCENT LIGHTING TECHNOLOGY

- Low cost.
- Energy efficient.
- For use in low to medium bay lighting applications.
- Consumes less than one-half of the total energy cost compared to metal halide lamps.
- Lumen output from the CFL lamp will not decay significantly.

CORDLIGHTS

- Weather resistant lamp sockets feature rigid-mounted eyelets for hooks or wire to simplify hanging.
- Suitable for indoor and outdoor use.
- Unique open and secure closure clasp on the heavy duty lamp cage easily facilitates lamp changes.
- A patented detent "snap-off, snap-on" fitting on the lamp socket enables quick replacement if the Safety Cage becomes damaged.

TEMPORARY LIGHTING

TIGER 100-WATT AND 60-WATT LED

TIGER™ 100-WATT AND 60-WATT TEMPORARY LED LUMINAIRES

Engineered Products Company's (EPCO) TIGER Temporary LED Luminaire is a low cost, energy efficient lighting solution that is highly functional for use in high and low bay lighting applications and a recommended alternative to metal halide light fixtures.

The TIGER Temporary LED Luminaire provides a productive work environment during building construction or major renovation, consumes less than half the total energy costs compared to metal halide lamps.

BENEFITS

- No assembly required! Ready to use out of the box.
- Impact resistant. Continues to operate with no degradation in lumen output.
- Provides optimal lumen output compared to traditional Metal Halide (HID) temporary luminaires.
- Compact size; shock and vibration resistant.
- Significant energy savings for 24 hours a day usage compared to other temporary lighting methods.
- Rated life is 50,000 hours, minimum.
- No ongoing lamp maintenance expenses.
- Meets the requirements of the 2017 National Electrical Code: Articles 410.62(C)(1) and (2), 410.104(A), 410.130(F)(5) and 590.4(F).

FEATURES

- Omni directional; directs 100% of the light outward and downward.
- Highest lumen output to weight ratio on the market
- "Snap-Lock" Hang Hook expedites installation to rebar, steel pipe or copper tubing
- Input Voltage Versatility: 120-277 VAC @ 60/50 Hz.
- Cord Length: 6-Foot (1828mm).
- Cord Type: 18 AWG SJT with NEMA 5-15 Plug.
- Heavy-duty welded Lamp Guard — White powder-coat finish.

Meets OSHA Compliance Standard 1915.82(b) for Temporary Lighting

Example: A 100-foot x 100-foot x 30-foot space with 80/50/20% reflectance values, the required spacing to meet OSHA lighting requirements:

- TIGER 100-Watt Temporary LED Luminaires OSHA compliance: 35-feet minimum spacing for 5-foot-candles compliance
- TIGER 60-Watt Temporary LED Luminaires OSHA compliance: 25-feet minimum spacing for 5-foot-candles compliance

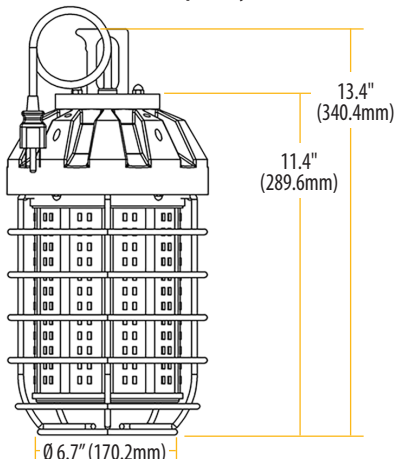


TIGER 100-WATT LED

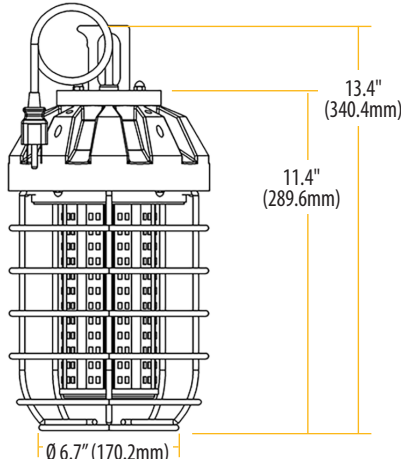


TIGER 60-WATT LED

TIGER 100-Watt Temporary LED Luminaire



TIGER 60-Watt Temporary LED Luminaire



TYPICAL APPLICATIONS:

- New Building Construction or Renovation
- Permanent lighting in large mechanical rooms
- Maintenance/storage spaces in commercial or institutional facilities
- Additional Lighting in Service Trucks (60-Watt only)



TIGER LED SPECIFICATIONS		
	TIGER 100-Watt Temporary LED Luminaire	TIGER 60-Watt Temporary LED Luminaire
Output Lumens	10,500	5,700
Power Factor	0.9	0.9
Correlated Color Temperature (CCT)	5000 - 5500K	5000 - 5500K
Color Rendering Index (CRI)	>80	>80
L ₇₀ Lumen Depreciation*	50,000 Hours	50,000 Hours
Efficacy**	110	100
Operating Temperature	-4°F (-20°C) to 113°F (45°C)	-4°F (-20°C) to 113°F (45°C)
Applications	Dry or Damp Environments	Dry or Damp Environments
Lamp Replacement	No	No
Restrike and Warm Up Time (Minutes)	Instant	Instant
Warranty	50,000 Hours / 5 Years	50,000 Hours / 5 Years
Lighting Load @ 120 Volts / 15 Amps	10 Maximum	20 Maximum

*Usable light level defined as L₇₀ — the point at which the Temporary LED Luminaire has dimmed to 70% of its original output.

**Measured as “luminous efficacy”; the ratio of luminous flux coming out (in Lumens) to electricity going in (in Watts).

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
15730	15730	TIGER LED: 100-Watt LED Temporary Luminaire with Lamp Guard and 6-FT 18 AWG SJT Cord	EA	1	BX	4	4	4	Yes	28
15731	15731	TIGER LED: 60-Watt LED Temporary Luminaire with Lamp Guard and 6-FT 18 AWG SJT Cord	EA	1	BX	4	4	4	Yes	24

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

TEMPORARY LIGHTING

TIGER 400 HID

TIGER 400 HID TEMPORARY LUMINAIRES

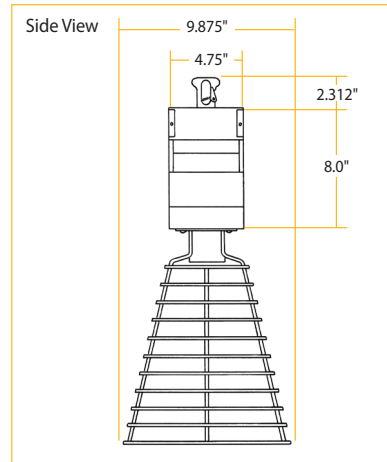
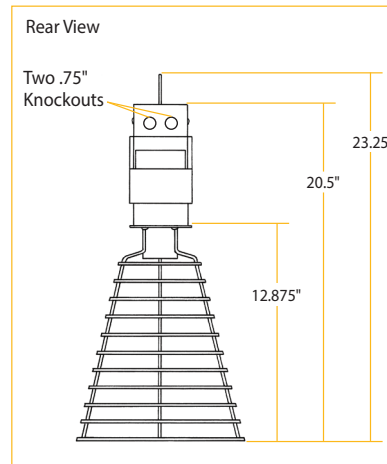
- UL Listed. Suitable for use in damp locations.
- Complies with the 2007 Energy Independence and Security Act (EISA).*
- Meets the requirements of the 2017 National Electrical Code: Articles 410.62(C)(1) and (2), 410.104(A), 410.130(F)(5) and 590.4(F).
- Compact size, lightweight and balanced construction.
- Easy to carry and install.

PULSE-START BALLAST

- Reliable, durable, maintenance free performance!
- A cost-effective solution to incandescent string lighting.
- Faster warm-up time (2 min. vs. 4 min.)
- Faster "hot" restrike (3-4 min. vs. 15-20 min.)
- Improved cold weather starting performance.
- Pre-wired at the factory for 120V operation. The multi-tap ballast can be re-configured for 208V, 240V or 277V applications.
- Improved efficacy (up to 45% more lumens per watt).

FIXTURE LAMP WITH CERAMIC ARC TUBE

- Improved lumen maintenance (up to 25%).
- Reduced color shift — more consistent lamp-to-lamp color.
- 15,000+ hours lamp life — up to 30% improvement over traditional probe-start luminaires.
- Higher initial lumen output.
- Superior color rendering and light stability.



TYPICAL APPLICATIONS:

- Construction Sites
- Industrial Facilities
- Arena Lighting
- High Rise Buildings
- Manufacturing Facilities
- Large Retail Centers
- Big Box Stores
- Discount Warehouses

METAL HALIDE LAMP SPECIFICATIONS

	Color Temperature	Lumen Output	Average Rated Life (In Hours)	Color Rendering Index	Voltage	(AMPs)
TIGER 400 HID	4000K	38,000	15,000	60	120	3.25

In compliance with EISA, EPCO's TIGER 400-Watt luminaire clearly displays a capital letter "E" printed within a circle (E) on the product carton and the ballast as specified by the Federal Trade Commission (FTC).

† The Illuminating Engineering Society of North America (IESNA), the authority in lighting, categorizes spaces as either high-bay (greater than 30-feet) or low-bay (less than 25-feet).

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
TIGER 400 HID Temporary Lighting										
15702	15702	TIGER 400 HID Temporary Luminaire: 400-Watt Type-O Metal Halide Lamp, 3-Foot Cord, Safety Cage and Lamp Guard	EA	1	BX	1	1	1	No	22
15752	15752	Type-O 400-Watt Metal Halide Lamp: Pulse-Start	EA	1	BX	20	20	1	No	2
HID Temporary Lighting Accessories										
15760*	15760	Universal Replacement HID Safety Cage and Lamp Guard: Clamp Mount	EA	1	BX	5	5	1	No	2

***Note:** Fits majority of manufacturer's HID Type-O and Type-S Temporary HID Luminaires.

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TIGRESS 105-WATT CFL TEMPORARY LUMINAIRE

Engineered Products Company's TIGRESS Temporary Luminaire is a low cost, energy efficient lighting solution that is highly functional for use in low to medium bay lighting applications and a recommended alternative to metal halide luminaires.

A 105-Watt Compact Fluorescent Lamp is included and provides a productive work environment during building construction or major renovation, consumes less than one-half of the total energy costs compared to metal halide lamps, and is approximately 3 to 5 times more efficient than standard incandescent lamps and can last up to 10 times longer.

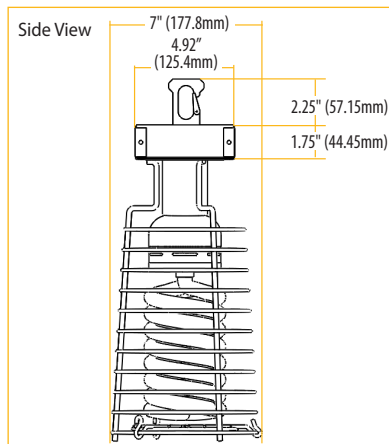
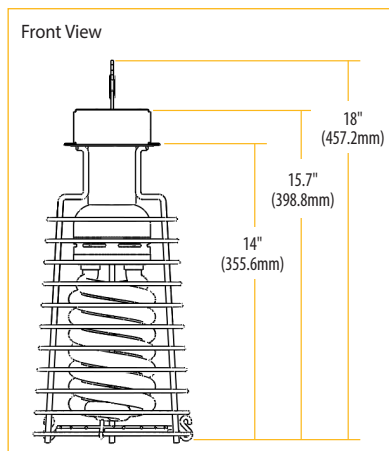
BENEFITS

- Meets the requirements of the 2017 National Electrical Code: Articles 410.62(C)(1) and (2), 410.104(A), 410.130(F)(5) and 590.4(F).
- Compact size, lightweight and balanced construction.
- Certification Standard: ETL Listed.
- Low maintenance and operating cost.
- Reliable, durable, maintenance free performance!
- Long lamp life.
- CFL lamp will not decay significantly when compared to metal halide lamps.
- Suitable for compact spaces — minimum 10-foot height.
- Instant restart in the event of a power outage.

FEATURES

- High luminous efficacy and durability.
- Steel housing; durable white powder-coat finish.
- Heavy-duty 11 AWG welded Lamp Guard — Silver.
- Hanging Hook.
- For 120V operation ONLY.
- Cord Type: 18/3 SJTW.
- Cord Length: 5-Feet (1524mm).

Note: For use in dry environments only!



TIGRESS

TYPICAL APPLICATIONS:

- Parking Garages
- Grocery Stores
- Retail Stores
- Mezzanine Areas
- Outdoor Areas
- Schools and University Gymnasiums
- New Building Construction or Renovation

105-Watt COMPACT FLUORESCENT LAMP SPECIFICATIONS

	Incandescent Equivalent*	Minimum Starting Temperature	Color Temperature	Lumen Output	Lumens per Watt	Average Rated Life (In Hours)	Color Rendering Index	Voltage	(AMPs)
TIGRESS 105-Watt CFL 300-Watt		10°F (-12°C)	5000K	6900	65	8,000	82	120	.875

*Equivalent to 175-Watt metal halide lamp (including lumen depreciation).

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
15720	15720	TIGRESS Temporary Luminaire: 105-Watt Compact Fluorescent Lamp, 5-Foot Cord, Safety Cage and Lamp Guard	EA	1	BX	1	1	1	No	7
15725	15725	105-Watt Compact Fluorescent Lamp - T4 Coil Type	EA	1	BX	10	10	1	No	1

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TEMPORARY LIGHTING

CORDLIGHTS AND ACCESSORIES

DELUXE CORDLIGHTS

- Deluxe CordLights are UL Listed and comply with UL Standard 1088 for Temporary Lighting Strings. File Number: E190858. Meets all OSHA Standards and meets the requirements of the 2017 National Electrical Code: Article 590.4(F).
- Intended for severe environments and are impervious to dust, dirt, chemical vapors, salt spray and other corrosive elements.
- Suitable for indoor and outdoor use.
- Weather-resistant lamp sockets feature rigid-mounted eyelets for hooks or wire to expedite and simplify hanging.
- Unique open and secure closure clasp on the heavy-duty Safety Cage easily facilitates bulb changes.
- Constructed of heavy-duty 14/2, 14/3 or 12/3 SJTW round cord (15 AMPS) with a 167°F (75°C) temperature rating
- A patented detent "snap-off, snap-on" fitting on the lamp socket enables quick replacement if the Safety Cage becomes damaged. U.S. Patent Number: D.439,697.
- Recommended for use with A21 LED lamp (P/N 15681) or A23 incandescent lamp (150-Watt maximum).



TYPICAL APPLICATIONS:

- Construction Sites
- Parking Lots
- Walkways
- Festivals
- Circus Tents
- Christmas Tree Lots
- Farmer's Markets

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Deluxe CordLights										
16010†	16010	Deluxe CordLights: 14/2 SJTW Round Cord, 100-Foot Length, 10-Foot Centers (without Plug) - Yellow	EA	1	BX	1	1	1	No	13
16350†	16350	Deluxe CordLights: 12/3 SJTW Round Cord, 100-Foot Length, 10-Foot Centers (without Plug) - Yellow	EA	1	BX	1	1	1	No	19
16353†	16353	Deluxe CordLights: 12/3 SJTW Round Cord, 100-Foot Length, 10-Foot Centers (with Molded Plug) - Yellow	EA	1	BX	1	1	1	No	19
16100	16100	Safety Cage: for Deluxe CordLight - Yellow	EA	1	BX	10	10	10	Yes	1
15681	15681	LED A21 Lamp: 15.5-Watt, 5000K, dimmable, Energy Star Rated; EA Lumen output is equal to 100-Watt incandescent lamp	EA	1	BX	12	12	1	No	1

† UL Standard 1008 - Article 17.2 - lamp guard shall be constructed of polymeric material. The actual molded product is polypropylene. Flame class is V-0 meets UL 746C.

CORDLIGHT ACCESSORIES

PIGTAIL LAMP SOCKET

- A patented detent "snap-off, snap-on" fitting on the lamp socket enables quick replacement if the Safety Cage becomes damaged. Can be used with EPCO Safety Cage (P/N: 16100).
- Suitable for indoor or outdoor use.
- 6-Inch leads, pre-stripped 5/8" (.625").
- Recommended for use with A21 LED lamp (P/N 15681) or A23 incandescent lamp (150-Watt maximum).



INSULATION PIERCING LAMP SOCKET

- Suitable for indoor and outdoor use.
- Integrally designed terminals and contacts provide a superior electrical connection.
- Use with 12 or 14 AWG THHN insulated stranded wire.
- No cutting, stripping, wire nuts or soldering required.
- Can be used with EPCO Safety Cage (P/N: 16110).
- Recommended for use with A21 LED lamp (P/N 15681) or A23 incandescent lamp (150-Watt maximum).



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
16022	16022	Insulation Piercing Lamp Socket	EA	5	BG	0	0	5	Yes	1
16023	16023	Pigtail Lamp Socket: with 6-Inch Leads	EA	5	BG	0	0	5	Yes	1
16100	16100	Safety Cage: for Deluxe CordLight - Yellow	EA	1	BX	10	10	10	Yes	1
16110	16110	Safety Cage: for Insulation Piercing Lamp Socket - Yellow	EA	1	BX	10	10	10	Yes	1
15681	15681	LED A21 Lamp: 15.5-Watt, 5000K, dimmable, Energy Star Rated; Lumen output is equal to 100-Watt incandescent lamp	EA	1	BX	12	12	1	No	1

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LANDSCAPE LIGHTING

The specific design of an outdoor lighting system is influenced by a variety of factors, including the site characteristics, the scope of the landscape, its function, as well as the building owner's requirements. But the creation of an outdoor lighting system should always include our Landscape SplicePost™ or LightPost™. A few of the value-added benefits include:

- Suitable for use in wet locations.
- Ready to install. No assembly required.
- 3" Outside diameter PVC LightPost fixture fitting.
- Replaces EMT, conduit connectors and weatherproof boxes.
- 100% UV, corrosion and shatter-resistant.
- Accommodates a 1/2" trade size conduit nipple to mount a variety of luminaires.
- The Uni-Stabilizer™ is made of durable polycarbonate material featuring four (4) uniquely shaped concaved stabilizing blades. This design enables ground material to be easily packed around the Landscape LightPost or SplicePost as well as provide solid in-ground support. The uni-stabilizer also helps resist against ground movement typically caused by ground freezing and thawing.
- The 20° slanted top virtually eliminates water pooling or leakage into the interior of the Landscape LightPost and SplicePost.
- 65° angled to bottom enables easy entry of UF Cable or conduit.
- Compact and attractive regardless of final height placement.

Compared to other designs, these landscape luminaire fixture fittings are a cost-effective and simple solution for permanent landscape, accent lighting or sign facade.

LANDSCAPE LIGHTING

LANDSCAPE SPLICEPOST

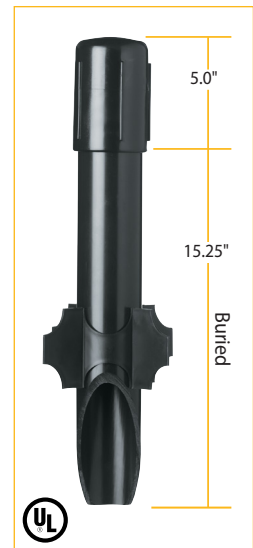
LANDSCAPE SPLICEPOST

Our Landscape SplicePost for outdoor luminaires is different from any other "hollow pipe" style landscape lightpost on the market. It features an internal wiring compartment/junction box, rated for 19 cubic inches that easily accommodates two (2) 20 AMP circuits. The Landscape SplicePost allows the installer to make a proper ground connection to safeguard people and property from electrical shock hazards.

- The Landscape SplicePost is UL Listed as a "Luminaire Fixture Fitting," suitable for use in wet locations.
- Meets the requirements of the 2017 National Electrical Code: Articles 314.15, 314.16(A)(2) and 314.17(B).
- The Landscape SplicePost features a Separator Disk™ and SpliceCap™ that creates an integral "junction box" suitable for splicing.
- The PVC SpliceCap is non-metallic and suitable for the majority of outdoor luminaires on the market.



Note: Cut-away shows wiring connections inside the SplicePost Cap.



NEC Article 314.15 ... boxes, conduit bodies and fittings installed in wet locations shall be listed for use in wet locations.

NEC Article 314.16(A)(2) — Boxes 1650 cm³ (100 in³) or less, other than those described in Table 314.16(A), and non-metallic boxes shall be durably and legibly marked by the manufacturer with their volume.

The Landscape SplicePost is shatter resistant to denting or cracking typically caused by landscape maintenance equipment. It is corrosion and UV resistant and impervious to changing environmental conditions.

When wiring multiple luminaires in series, the Landscape SplicePost's angled bottom allows UF Cable or Conduit to easily enter at different depths to eliminate cable congestion.



SpliceCap accommodates a 1/2" trade size conduit nipple.

NEC Article 314.17 — Conductors entering boxes, conduit bodies or fittings shall be protected from abrasion and shall comply with 314.17(B).

... Where raceway or cable is installed with metal boxes or conduit bodies, the raceway or cable shall be secured to such boxes and conduit bodies.

Replaces EMT, conduit connectors and weatherproof boxes.

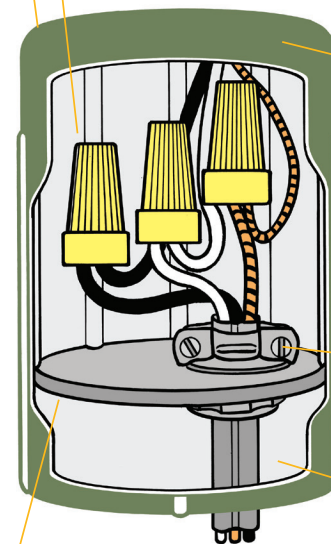
Uni-Stabilizer™ features unique concave stabilizing blades allow ground material to be easily packed around the Landscape SplicePost for fast, easy and secure installation.

The Uni-Stabilizer minimizes the Landscape SplicePost's movement typically caused by ground freezing and thawing.

LANDSCAPE SPLICEPOST — SPLICECAP CUT-AWAY EXAMPLE

The SpliceCap's 19 cubic inch box volume can house two (2) 20 AMP circuit conductors.

Eight (8) internal "Stops" seat and firmly hold the Separator Disk in place when the SpliceCap is positioned on the PVC Pipe.



SpliceCap compartment fully encloses and protects the circuit conductors from moisture, dirt and abrasion.

Raised "Grips" simplify installation and removal of the SpliceCap.

UF Connector secures the incoming supply line cable to the Separator Disk.

Incoming supply line cable.

Separator Disk with attached Ground Wire. Use with non-grounded metallic luminaires to make a safe ground connection.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Landscape SplicePost										
LSPB	17200	Landscape SplicePost: PVC - Black	EA	1	BX	9	9	9	Yes	21
17230	17230	Landscape SplicePost Cap: PVC, Separator Disk - Black	EA	1	BX	12	12	12	Yes	1

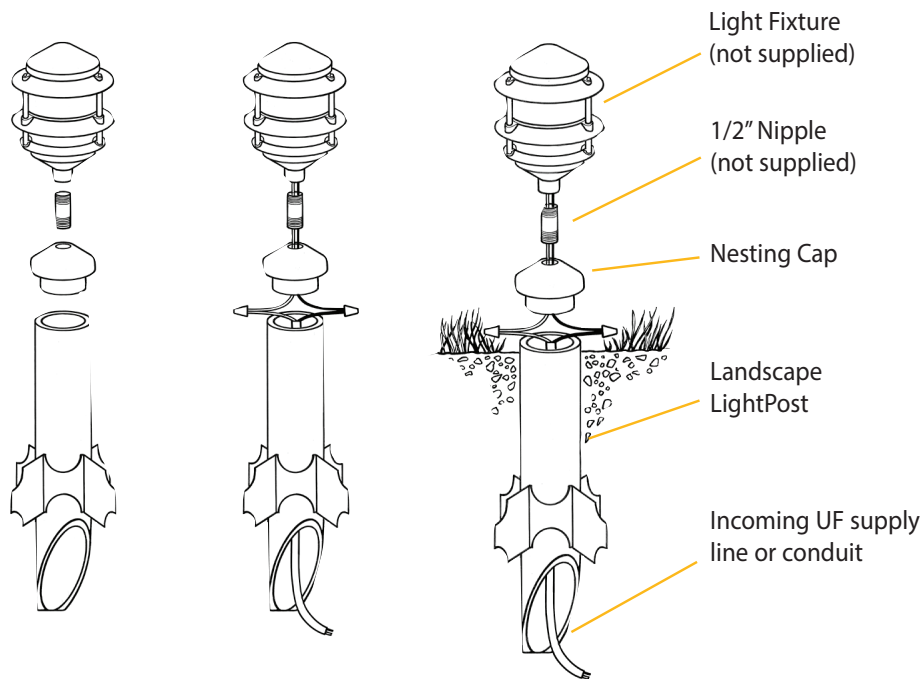
Note: Landscape SplicePosts are ONLY sold in case quantities of nine (9) per Carton.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

LANDSCAPE LIGHTPOST

The Landscape LightPost is UL Listed as a "Luminaire Fixture Fitting," suitable for use in wet locations and complies with the 2017 National Electrical Code: Article 314.15. It is designed for line voltage landscape luminaires but can also be used for low voltage luminaire.

***Note:** The Landscape LightPost should always be used with a UL Listed Luminaire and a grounding means (i.e., ground bonded third wire) suitable for use in wet locations.



ASSEMBLY INSTRUCTIONS

1. Feed the luminaire's black, white and ground wires through the 1/2" nipple (not supplied) and Nesting Cap. Thread and tighten the 1/2" nipple into the top of the Nesting Cap.
2. Using wire nuts or another appropriate connector, connect the supply wires to the luminaire's wires. Then push the luminaire and Nesting Cap onto the top of the Landscape LightPost.
3. Place the wired Landscape LightPost into the excavated trench and position to the desired height.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Landscape LightPost										
LLPN25B	12701	Landscape LightPost: 17.5-Inch - Black	EA	1	BX	9	9	9	Yes	21
E04-002-004	14025	Landscape LightPost Cap: Black	EA	1	BX	12	12	12	Yes	1

Note: Landscape LightPosts are ONLY sold in case quantities of nine (9) per Carton.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

GROUND BONDING

GROUND BONDING

- **GROUND BONDING PIGTAILS**
- **POWERTAILS DEVICE WIRING CONDUCTORS**
- **GROUND SCREWS**
- **GROUND CLIP**

**CUSTOM CAPABILITIES
AVAILABLE! SEE PAGE 79**

GROUND BONDING PIGTAILS

GROUND BONDING

We introduced the Stranded Grounding PigTail over 40 years ago. Today, we have sold millions of Ground Bonding PigTails. Our manufacturing expertise, quality, reliability, and expedited delivery time have always met customer expectations.

Our Ground Bonding products provide a permanent and positive connection for the grounding system to ensure an effective, low-impedance ground-fault current path to safeguard people and property from electrical hazards.

WHY CONTRACTORS USE EPCO GROUND BONDING PIGTAILS AND POWERTAILS

No other company manufactures more combinations of PigTails and PowerTails Device Wiring Conductors than we do. Our solid and stranded wire, single and dual-gang Ground Bonding PigTails are available in 6.5", 8", 10", and 12" lengths and include a grounding screw, and a machine-made, insulated crimped Ring or Flanged Spade Fork Terminal.

- The Ring Terminal used is a true grounding ring that actually "bites" into the screw head and receptacle box to ensure an excellent "ground" connection.
- The factory made insulation crimp on the Ring Terminal and Flanged Fork Spade Terminal puts less stress on the conductor's strands to ensure an excellent ground and power connection because the strands will not break or separate when these conductors are pushed into the junction box.
- The Flanged Fork Spade Terminal has "angled" flanges on the end of the "fork" that will stay in place to help the installer connect the PigTail or PowerTail to the appropriate screw on the receptacle, switch or device.

ADVANTAGES FOR THE CONTRACTOR

- UL Listed from the Factory.
- Installation speed and reliability!
- Cost-effective and efficient.
- Quickly connect receptacles, switches or other devices.
- The perfect products for pre-fabrication work in the shop or on the job site.
- A variety of configurations and lengths that meet a broad range of applications.
- Ground Bonding PigTails and PowerTail products are available in reusable tubes.
- 12 AWG is the standard wire size. 14 AWG Ground Bonding PigTails are available.
- Solid Wire Ground Bonding PigTails: THHN Building Wire.
- Stranded Wire Ground Bonding PigTails: THHN Building Wire (19 or 65 strand).
- Ground Bonding PigTails in bulk quantities of 1,000 are available. Contact our Inside Sales Department (800.336.1976 or sales@engproducts.com) for more information.

GROUND SCREW CHOICES

- Self-tapping GSC Ground Screw is used by contractors when the metallic junction box's ground screw hole is not tapped or is not "cleanly" tapped.
- Tapered Point GSH Ground Screw is a labor saving screw used by contractors. This ground screw is easy to start in the pre-tapped hole.

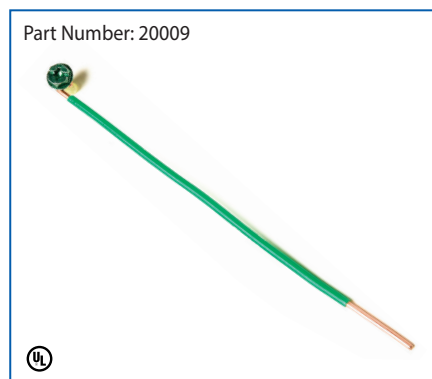
GROUND BONDING

GROUND BONDING PIGTAILS

GROUND BONDING PIGTAILS — INSULATED SOLID WIRE (WIRE GAUGE SIZE IS 12 AWG EXCEPT WHERE NOTED)

- UL Listed.
- Our Solid Wire Ground Bonding PigTails are recommended for use in metal box applications.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(A) and (B) and 250.8(A).
- Features a captive GSH or GSC Green Ground Screw on one end, the other end is pre-stripped 1".
- Available in 6.5", 8", 10" and 12" lengths.
- Typical applications:
 - When a standard Stranded Wire PigTail is not required.
 - Ground bonding in a power distribution box, junction box or multi-gang receptacle box.

Part Number: 20009



Note: See Page 79 for detailed descriptions on the differences between the GSC and GSH Ground Screws.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
With GSC Ground Screw										
20016	20016	6.5" PigTail: Captive GSC Ground Screw — Stripped 1"	PKG	50	PKG	10	500	50	Yes	9
10016	10016	6.5" PigTail (BULK): Captive GSC Ground Screw — Stripped 1"	PKG	1000	BN	1000	1000	1000	Yes	18
20086	20086	8" PigTail: Captive GSC Ground Screw — Stripped 1"	PKG	50	PKG	10	500	50	Yes	11
20088	20088	10" PigTail: Captive GSC Ground Screw — Stripped 1"	PKG	50	PKG	10	500	50	Yes	13
With GSH Ground Screw										
20009*	20009	6.5" PigTail: Captive GSH Ground Screw — Stripped 1"	PKG	50	PKG	10	500	50	Yes	9
10009*	10009	6.5" PigTail (BULK): Captive GSH Ground Screw — Stripped 1"	PKG	1000	BN	1000	1000	1000	Yes	18
20010	20010	6.5" PigTail (14 AWG): Captive GSH Ground Screw — Stripped 1"	PKG	50	PKG	10	500	50	Yes	7
10010	10010	6.5" PigTail (14 AWG) (BULK): Captive GSH Ground Screw — Stripped 1"	PKG	1000	BN	1000	1000	1000	Yes	14
20011*	20011	8" PigTail: Captive GSH Ground Screw — Stripped 1"	PKG	50	PKG	10	500	50	Yes	11
10011*	10011	8" PigTail (BULK): Captive GSH Ground Screw — Stripped 1"	PKG	1000	BN	1000	1000	1000	Yes	22
20087	20087	10" PigTail: Captive GSH Ground Screw — Stripped 1"	PKG	50	PKG	10	500	50	Yes	13

*Contractor preferred

REFERENCE GUIDE — INSULATED SOLID WIRE PIGTAILS (WIRE GAUGE SIZE IS 12 AWG EXCEPT WHERE NOTED)

PART NUMBERS

20016: 6.5-Inch PigTail: With captive GSC Ground Screw - Stripped 1".

10016: 6.5-Inch (BULK)

20086: 8-Inch

20088: 10-Inch



20009: 6.5-Inch* PigTail: With captive GSH Ground Screw - Stripped 1".

10009: 6.5-Inch (BULK)*

20010: 6.5-Inch (14 AWG)

10010: 6.5-Inch (14 AWG) (BULK)

20011: 8-Inch*

10011: 8-Inch (BULK)*

20087: 10-Inch



EPCO Ground Bonding PigTails are Made in the USA.

Complies with the American Recovery and Reinvestment Act — Buy American Provision.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

GROUND BONDING PIGTAILS — INSULATED STRANDED WIRE (WIRE GAUGE SIZE IS 12 AWG EXCEPT WHERE NOTED)

- UL Listed.
- Labor and Time Savings!
- Our Stranded Wire Ground Bonding PigTails can save the contractor up to 50 cents per installation.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(A) and (B) and 250.8(A).
- Factory-crimped Flanged Spade Terminal or Ring Terminal meets the requirements of the 2017 National Electrical Code: Article 110.4 and provides precise electrical terminations.
- Typical applications: Ground bonding in a power distribution box, junction box or multi-gang receptacle box.



Note: See Page 79 for detailed descriptions on the differences between the GSC and GSH Ground Screws.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Without Ground Screws										
20008*	20008	8" PigTail: One (1) Flanged Spade Terminal — Stripped 5/8"	PKG	50	PKG	10	500	50	Yes	13
10008*	10008	8" PigTail (BULK): One (1) Flanged Spade Terminal — Stripped 5/8"	PKG	1000	BN	1000	1000	1000	Yes	26
With GSC Ground Screw										
20020	20020	10" PigTail: Ring Terminal, captive GSC Ground Screw, One (1) Flanged Spade Terminal	PKG	50	PKG	10	500	50	Yes	15
20026	20026	12" PigTail: Ring Terminal, captive GSC Ground Screw, One (1) Flanged Spade Terminal	PKG	50	PKG	10	500	50	Yes	17
20035	20035	10" PigTail: Ring Terminal, captive GSC Ground Screw — Stripped 5/8"	PKG	50	PKG	10	500	50	Yes	14
20036	20036	8" PigTail: Ring Terminal, captive GSC Ground Screw — Stripped 5/8"	PKG	50	PKG	10	500	50	Yes	12
20041	20041	8" PigTail: Ring Terminal, captive GSC Ground Screw, One (1) Flanged Spade Terminal	PKG	50	PKG	10	500	50	Yes	13
10041	10041	8" PigTail (BULK): Ring Terminal, captive GSC Ground Screw, One (1) Flanged Spade Terminal	PKG	1000	BN	1000	1000	1000	Yes	26
With GSH Ground Screw										
20003	20003	8" PigTail (14 AWG): One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	50	PKG	10	500	50	Yes	16
10003	10003	8" PigTail (14 AWG) (BULK): One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	1000	BN	1000	1000	1000	Yes	32
20004*	20004	8" PigTail: One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	50	PKG	10	500	50	Yes	13
10004*	10004	8" PigTail (BULK): One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	1000	BN	1000	1000	1000	Yes	26
20019	20019	10" PigTail: One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	50	PKG	10	500	50	Yes	15
20025	20025	12" PigTail: One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	50	PKG	10	500	50	Yes	17
20029*	20029	8" PigTail: Ring Terminal, captive GSH Ground Screw — Stripped 5/8"	PKG	50	PKG	10	500	50	Yes	12

*Contractor preferred

 EPCO Ground Bonding PigTails are Made in the USA.
Complies with the American Recovery and Reinvestment Act — Buy American Provision.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

REFERENCE GUIDE — INSULATED STRANDED WIRE PIGTAILS (WIRE GAUGE SIZE IS 12 AWG EXCEPT WHERE NOTED)

PART NUMBERS

20008: 8-Inch*

10008: 8-Inch (BULK)*

PigTail: One (1) Flanged Spade Terminal - Stripped 5/8".



20041: 8-Inch

10041: 8-Inch (BULK)

20020: 10-Inch

20026: 12-Inch

PigTail: One (1) Flanged Spade Terminal and a captive GSC Ground Screw.



20003: 8-Inch (14 AWG)

10003: 8-Inch (14 AWG) (BULK)

20004: 8-Inch*

10004: 8-Inch (BULK)*

20019: 10-Inch

20025: 12-Inch

PigTail: One (1) Flanged Spade Terminal and a captive GSH Ground Screw.



20029: 8-Inch*

PigTail: Ring Terminal and a captive GSH Ground Screw - Stripped 5/8".



20036: 8-Inch

20035: 10-Inch

PigTail: Ring Terminal and a captive GSC Ground Screw - Stripped 5/8".

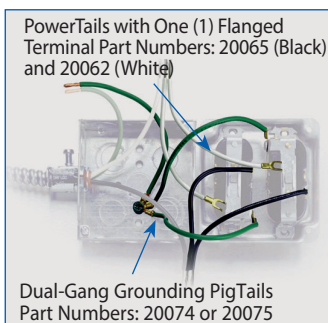


*Contractor preferred

SINGLE AND DUAL-GANG GROUND BONDING PIGTAILS (12 AWG ONLY)

- Labor and Time Savings!
- UL Listed.
- Matched Flanged Spade and Ring Terminals ensure a safe, reliable ground connection.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(A) and (B) and 250.8(A).

Reprinted from the 2017 National Electrical Code: Article 250.148 — Continuity and Attachment of Equipment Grounding Conductors to Boxes: Where circuit conductors are spliced within a box, or terminated on equipment within, or supported by a box, any equipment grounding conductor(s) associated with those circuit conductors shall be connected within the box or to the box with devices suitable for the use in accordance with 250.148(A) through (E).



Part Number: 20074



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
20067	20067	Single-Gang PigTail: One (1) 8" Solid Wire Incoming Lead - Stripped 1", One (1) 8" Stranded Wire Conductor with One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	20	PKG	10	200	20	Yes	9
20068	20068	Single-Gang PigTail: One (1) 8" Stranded Wire Incoming Lead - Stripped 5/8", One (1) 8" Stranded Wire Conductor with One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	20	PKG	10	200	20	Yes	9
20070*	20070	Dual-Gang PigTail: Two (2) 8" Stranded Wire Conductors, each with One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	20	PKG	10	200	20	Yes	10
20074*	20074	Dual-Gang PigTail: One (1) 8" Solid Wire Incoming Lead - Stripped 1", Two (2) 8" Stranded Wire Conductors, each with One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	20	PKG	10	200	20	Yes	11
20075	20075	Dual-Gang PigTail: One (1) 8" Stranded Wire Incoming Lead - Stripped 5/8", Two (2) 8" Stranded Wire Conductors, each with One (1) Flanged Spade Terminal, captive GSH Ground Screw	PKG	20	PKG	10	200	20	Yes	13

*Contractor preferred






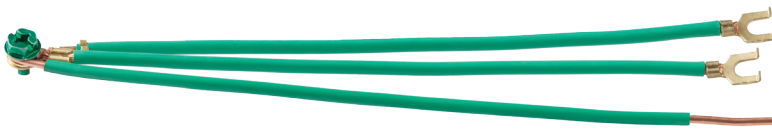
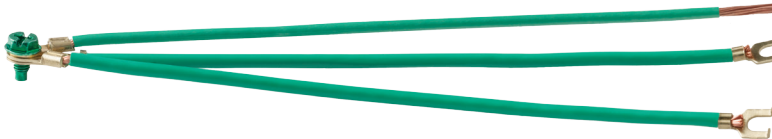
EPCO Ground Bonding PigTails are Made in the USA.

Complies with the American Recovery and Reinvestment Act - Buy American Provision.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

REFERENCE GUIDE — SINGLE AND DUAL-GANG GROUND BONDING PIGTAILS (12 AWG ONLY)

PART NUMBERS

20067: 8-Inch	Single-Gang PigTail: One (1) 8" Solid Wire Incoming Lead - Stripped 1", One (1) 8" Stranded Wire Conductor with One (1) Flanged Spade Terminal and a captive GSH Ground Screw.		(UL 1015) (THHN)
20068: 8-Inch	Single-Gang PigTail: One (1) 8" Stranded Wire Incoming Lead - Stripped 5/8", One (1) 8" Stranded Wire Conductor with One (1) Flanged Spade Terminal and a captive GSH Ground Screw.		(THHN) (UL 1015)
20070: 8-Inch*	Dual-Gang PigTail: Two (2) 8" Stranded Wire, Conductors each with One (1) Flanged Spade Terminal and a captive GSH Ground Screw.		(UL 1015)
20074: 8-Inch*	Dual-Gang PigTail: One (1) 8" Solid Wire Incoming Lead - Stripped 1", Two (2) 8" Stranded Wire Conductors with Two (2) Flanged Spade Terminals and a captive GSH Ground Screw.		(UL 1015) (THHN)
20075: 8-Inch	Dual-Gang PigTail: One (1) 8" Stranded Wire Incoming Lead - Stripped 5/8", Two (2) 8" Stranded Wire Conductors with Two (2) Flanged Spade Terminals and a captive GSH Ground Screw.		(THHN) (UL 1015)



POWERTAILS DEVICE WIRING CONDUCTORS (12 AWG ONLY)

- UL Listed.
- Labor Savings Tool! Used by contractors that wire Commercial and Industrial buildings when using single and/or multi-gang metal boxes.
- Provides installation speed and a reliable connection when bringing power to multiple devices. Perfect for pre-wiring devices in the contractor's shop or on the job site.
- 8" Length Black or White leads feature a factory crimped Flanged Spade Terminal that slips under the terminal screw on the device.
- Manufactured using flexible 12 AWG stranded wire to easily push into the junction box.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(A) and (B).

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
20062	20062	8" PowerTail: White, Stranded Wire Conductor with One (1) Flanged Spade Terminal - Stripped 5/8"	PKG	50	PKG	10	500	50	Yes	9
10062	10062	8" PowerTail (BULK): White, Stranded Wire Conductor with One (1) Flanged Spade Terminal - Stripped 5/8"	PKG	1000	BN	1000	1000	1000	Yes	18
20065	20065	8" PowerTail: Black, Stranded Wire Conductor with One (1) Flanged Spade Terminal - Stripped 5/8"	PKG	50	PKG	10	500	50	Yes	9
10065	10065	8" PowerTail (BULK): Black, Stranded Wire Conductor with One (1) Flanged Spade Terminal - Stripped 5/8"	PKG	1000	BN	1000	1000	1000	Yes	18

REFERENCE GUIDE — POWERTAILS DEVICE WIRING CONDUCTORS (12 AWG)

PART NUMBERS

20062: White	PowerTail: Stranded Wire Conductor with One (1) Flanged Spade Terminal - Stripped 5/8".		(THHN)
10062: White (BULK)			
20065: Black			UL
10065: Black (BULK)			

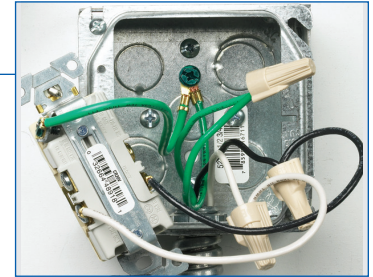
 EPCO PowerTails are Made in the USA.
Complies with the American Recovery and Reinvestment Act - Buy American Provision.

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

SINGLE AND DUAL-GANG GROUND BONDING PIGTAILS — APPLICATION EXAMPLES

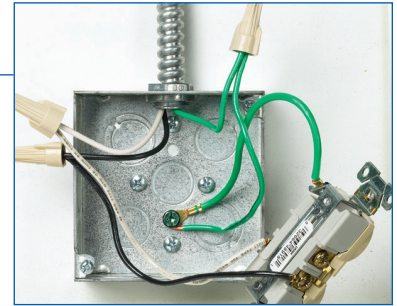
SINGLE-GANG SOLID WIRE: P/N 20067

The ground screw is screwed into and bonds the metal junction box. The single stranded wire grounding conductor with the flanged spade terminal from this same PigTail grounds the receptacle. The solid wire grounding conductor on the PigTail will ground the receptacle. The solid wire grounding conductor on the PigTail connects to the MC Cable and bonds back to the service panel.



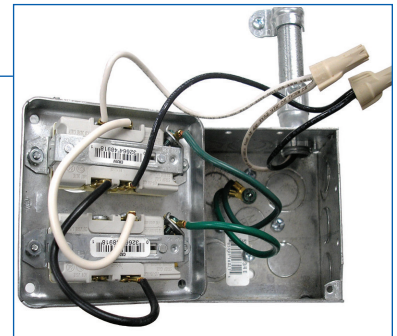
SINGLE-GANG STRANDED WIRE: P/N 20068

The ground screw is screwed into and "grounds" the metal junction box. The single stranded wire grounding conductor with the flanged spade terminal from this PigTail grounds the receptacle. The stranded wire grounding conductor on the PigTail connects (by wire nut) the incoming ground conductor in the MC Cable and bonds back to the service panel.



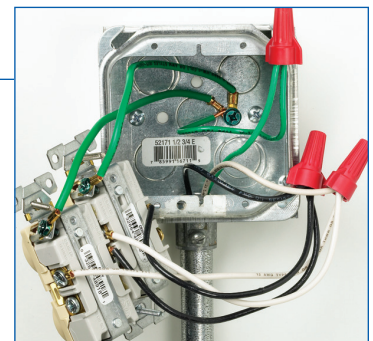
DUAL-GANG STRANDED WIRE: P/N 20070

The ground screw is screwed into the 10/32 tapped grounding hole opening in the metal junction box, bonding the junction box to the conduit system and grounded back to the service panel. The two (2) stranded wire ground PigTails with the flanged spade terminals would then connect to the grounding screw of the receptacles or switches to be wired.



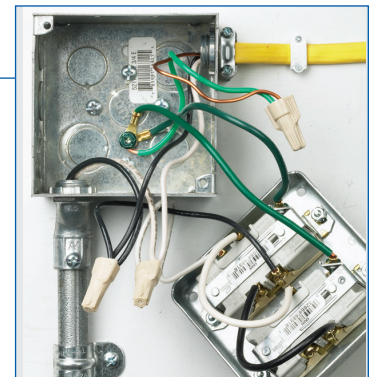
DUAL-GANG SOLID WIRE: P/N 20074

The ground screw is screwed into and bonds the metal junction box. The two (2) stranded wire grounding conductors with the flanged spade terminals from this PigTail grounds each receptacle. The solid wire conductor on the PigTail connects by wire nut to the incoming ground conductor in the conduit and bonds back to the service panel.



DUAL-GANG STRANDED WIRE: P/N 20075

The ground screw is screwed into and "grounds" the metal junction box and is bonded back to the service-grounded panel. Two (2) stranded wire grounding conductors with flanged spade terminals from this PigTail ground each receptacle. The stranded wire grounding conductor on the PigTail connects by wire nut to the ground conductor from the incoming cable.



GROUND SCREWS

Our Ground Screws are manufactured in compliance with the Restriction of Hazardous Substances (RoHS) European Directive. These Screws (#10-32 x .375") meet the requirements of the 2017 National Electrical Code: Article 250.8.

GSC — Cutting Point Screw – Combination hex head, slotted, Phillips and square drive screw for use in metal boxes when holes have not been pre-tapped.

GSH — Hex Head Screw – Combination slotted, Phillips and square drive tapered point screw used to simplify wiring installations when pre-tapped holes exist in metal boxes.

Note: The Directive of the 2002/95/EC European Union (EU), restricts the use of certain hazardous substances in electrical and electronic equipment. Those substances are Lead, Mercury, Cadmium, Hexavalent Chromium, PBBs.



GSH Ground Screw -
Hex Head Screw



GSC Ground Screw -
Cutting Point Screw



GROUND CLIPS

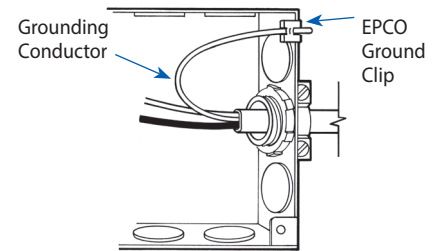
Our Ground Clips are an excellent time and labor saving alternative to Ground Screws and are specifically designed for termination of the grounding conductor and should be used when a 10-32 hole is not pre-drilled or tapped into a metallic junction box.

Since ground clips are forced onto the outside edge of the junction box, we recommend using a "new" clip instead of re-using the old clip. Clips should never be forced onto the round portion of a plaster ring or a poor electrical connection will result.

INSTALLATION PROCEDURE

The correct way to install a ground clip is to feed the grounding conductor into the ground clip with the shorter part of the ground clip placed inside the junction box.

Then use the flat blade of a screwdriver to force the ground clip onto the junction box to ensure a good electrical connection. See illustration.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Ground Screws										
GSC	10053	GSC: Slotted, #2 Phillips, Hex Head with Cutting Point - Green	PKG	100	PKG	10	1000	100	Yes	1
20053	20053	GSC: Bulk	C	1000	BN	1000	1000	1000	Yes	10
GSH	10051	GSH: Slotted, #2 Phillips, Hex Head, #2 Robertson with Tapered Die Point - Green	PKG	100	PKG	10	1000	100	Yes	1
20051	20051	GSH: Bulk	C	1000	BN	1000	1000	1000	Yes	10
Ground Clips										
GC	10052	Ground Clip: for 14 AWG -12 AWG Solid Wire	PKG	100	PKG	10	1000	100	Yes	1
20052	20052	GC: Bulk	C	1000	BN	1000	1000	1000	Yes	10

Note: Ground Screws listed above are used in our Ground Bonding PigTails.

DON'T SEE WHAT YOU WANT? LET EPCO'S CUSTOM CAPABILITIES HELP YOU!

We can produce any EPCO Ground Bonding PigTails in "bulk" packaging (1,000 per carton), or in any multiple package types utilizing our high-speed production and packaging equipment. Special options include "custom" packaging, labeling, bar coding, and other kitting services to meet your application requirements.

From simple to complex, our "custom" capability extends beyond producing quality PigTails. We can produce any type of ground bonding product — grounding straps, ground harness assemblies, and other grounding solutions needed for your specific application.

Contact your local EPCO Sales Representative (See Page 93) or EPCO Inside Sales at sales@engproducts.com or 800.336.1976 for more information.



UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

SPLICE KITS/ HEAT SHRINK TUBING

**SPLICE KITS/
HEAT SHRINK TUBING**

- **SPLICE KITS**
- **HEAT SHRINK TUBING**



SPLICE KITS

Our Splice Kits provide a permanent water resistant seal that eliminates expensive crimping tools when splicing aluminum or copper conductors. These splice kits are specifically intended for direct burial applications and designed to eliminate any cable deterioration and other problems that can lead to open circuits and cable failure.

Our Splice Kits are labor saving solutions that meet or exceed the electrical contractor's requirements and can easily encapsulate 18 AWG to 1/0 AWG multi-conductor wire splices as well as single service conductors up to 250 MCM. Heating the heat shrink tubing over the mechanical connector melts the adhesive to the cable, sealing the splice from moisture and providing insulation and protection. Only a standard screwdriver is required to terminate the wire into the mechanical connector.

Our kits are available in five (5) types and include the tubing, sealant and mechanical connectors to ensure a safe and reliable splice.

SPLICE KIT COMMONALITIES

- UL Listed.
- Meets the requirements of the 2017 National Electrical Code: Article 110.14(B).
- Eliminates epoxies, tapes or separate mastics.
- Creates a waterproof splice.
- 600 Volt maximum, 221°F (105°C) rating.

Note: Our Heat Shrink Torch is always recommended for use with all EPCO Splice Kits. A torch used for sweating copper tubing will not work and could burn a hole in the shrink tubing!

SPLICE KITS AWG CHART

Copper Butt Splice Kits	AWG	
BSK1 BSK2	14	
	13	
	12	
	11	
	10	
	9	
	8	8
BSK3 BSK4		7
		6
		5
		4
		3
		2

Dual Rated Butt Splice Kits	Logical AWG Number	AWG (and "Aught" *0 Equivalent)	MCM or kcmil
DRBSK	8	8	17
	7	7	21
	6	6	26
	5	5	33
	4	4	42
DRBSK1	2	2	66
	1	1	84
	0	1/0	106
DRBSK3	-1	2/0	133
	-2	3/0	168
	-3	4/0	212
	-3.7	4.7/0	250

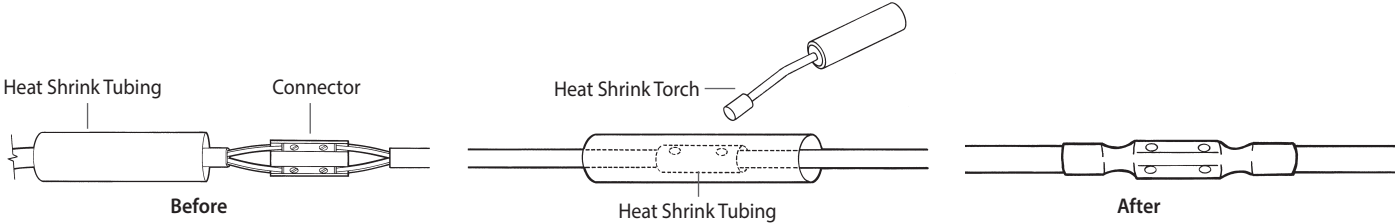
UF CABLE SPLICE KIT — FOR DIRECT BURIAL

- UL Listed for direct burial. File Number: E123896.
- Labor Savings! Obsoletes messy, two part Splice Kits.
- Accommodates UF Cables sizes: 14/3 without ground minimum, 8/3 without ground maximum.
- 600 Volts maximum, 221°F (105°C) temperature rating.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(B), 300.5(E) and 300.50(D).



The UF Cable Splice Kit includes one (1) 4-position mechanical connector and one (1) piece of heat shrink tubing to splice and insulate 14 AWG to 8 AWG UF Cable.

By using Thick Wall Heat Shrink Tubing with sealant and the mechanical connector, the repair of UF Cable is a quick, easy and reliable process. No epoxies, tape or separate mastics are required.

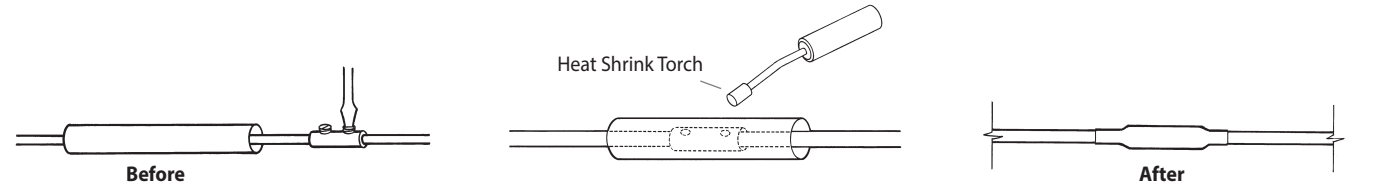


Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
UFC2B	10711	UF Cable Splice Kit: Accommodates Cable Sizes – 14/3 without Ground (minimum), 8/3 without Ground (maximum)	EA	1	BG	24	24	1	No	2

COPPER BUTT SPLICE KITS

- UL Listed. File Number: E103228.
- Labor Savings! Designed to simplify splicing discreet copper conductors.
- Sizes: 14 AWG to 2 AWG.
- BSK series is rated for 600 Volts maximum, 221°F (105°C) temperature rating.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(B), 300.5(E) and 300.50(D).

BSK Splice Kits include a mechanical copper butt splice connector and an 8" piece of thick wall heat shrink tubing to create a fully insulated butt splice.

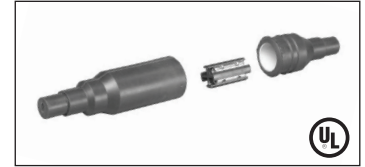
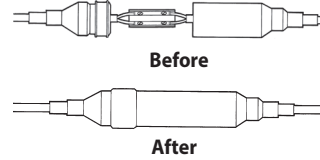


Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
BSK1	10705	Butt Splice Kit: includes One (1) Butt Splice Connector - 8 AWG to 14 AWG; One (1) Heat Shrink Tube - 14 AWG to 10 AWG	EA	1	BG	24	24	1	No	2
BSK2	10706	Butt Splice Kit: includes Three (3) Butt Splice Connectors - 8 AWG to 14 AWG; Three (3) Heat Shrink Tubes - 14 AWG to 10 AWG	EA	1	BG	24	24	1	No	2
BSK3	10708	Butt Splice Kit: includes One (1) Butt Splice Connector - 2 AWG to 8 AWG; One (1) Heat Shrink Tube - 6 AWG to 2 AWG	EA	1	BG	24	24	1	No	2
BSK4	10709	Butt Splice Kit: includes Three (3) Butt Splice Connectors - 2 AWG to 8 AWG; Three (3) Heat Shrink Tubes - 6 AWG to 2 AWG	EA	1	BG	24	24	1	No	2

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

SELF SEALING UF SPLICE KIT — FOR DIRECT BURIAL

- UL Listed for direct burial. File Number: E123896.
- Labor Savings! Simplifies the assembly of a moisture resistant splice.
- Protects electrical connections and allows for re-entry if needed.
- Eliminates use of epoxies, tape or mastics.
- 600 Volts maximum, 221°F (105°C) temperature rating.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(B), 300.5(E) and 300.50(D).

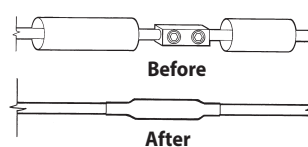


The uniquely designed interference fit cover enables direct burial of UF Cable to be a quick and reliable process. The kit includes a mechanical connector, silicone lubricant and the interference fit covers. Accommodates 14 AWG to 8 AWG wire sizes.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
UFC3/4	10703	Self Sealing UF Splice Kit: Accommodates Cable Sizes – 14/3 without Ground (minimum), 8/3 with Ground (maximum)	EA	1	BG	24	24	1	No	3

DUAL RATED BUTT SPLICE KITS — FOR DIRECT BURIAL

- Eliminates expensive crimping tools when splicing aluminum or copper conductors for direct burial.
- UL Listed components.
- 600 Volts maximum, 221°F (105°C) temperature rating.
- For use with aluminum and copper conductors.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(B), 300.5(E) and 300.50(D).

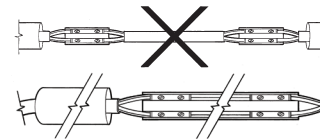


The kits include a pair of thick wall heat shrink tubing (2 pieces) and one (1) mechanical connector. Popular splicing applications include repair and/or extending type USE Cable.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
DRBSK	11499	Dual Rated Butt Splice Kit: Includes one (1) Dual Rated Connector - 2 AWG to 14 AWG; Two (2) Heat Shrink Tubes - 6 AWG to 2 AWG	EA	1	BG	24	24	1	No	3
DRBSK1	11500	Dual Rated Butt Splice Kit: Includes One (1) Dual Rated Connector - 14 AWG to 1/0 AWG; Two (2) Heat Shrink Tubes - 1 AWG to 3/0 AWG	EA	1	BG	24	24	1	No	3
DRBSK3	11501	Dual Rated Butt Splice Kit: Includes One (1) Dual Rated Connector - 250 MCM to 6 AWG; Two (2) Heat Shrink Tubes - 2/0 AWG to 350 MCM	EA	1	BG	24	24	1	No	3

UF STRETCHER KIT — FOR DIRECT BURIAL

- UL Listed for direct burial. File Number: E123896.
- Labor Savings! Includes one 11.5" mechanical connector that eliminates the need to use two (2) UF Cable Splice Kits (P/N: UFC2B) and a short piece of cable when repairing a longer section of damaged UF Cable.
- 600 Volts maximum, 221°F (105°C) temperature rating.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(B), 300.5(E) and 300.50(D).



Simplify UF Cable repairs after a trencher or backhoe has damaged or destroyed a 7" to 10" section of UF Cable. Utilize our Thick Wall Heat Shrink Tubing with sealant to make a quick and reliable repair. Eliminates epoxies, tapes or separate mastics and creates a waterproof splice. The kit includes one (1) 4-position 11.5" connector and one (1) piece of heat shrink tubing. Designed to splice and insulate 14 AWG to 8 AWG UF Cable.

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
UFS2	10714	UF Stretcher Kit: Accommodates Cable Sizes – 14/3 without Ground (minimum), 8/3 without Ground (maximum)	EA	1	BG	12	12	1	No	3

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton



HEAT SHRINK TUBING

Our Thick Wall Heat Shrink Tubing for direct burial applications is made from cross-linked polyolefin. This tough, versatile tubing can be used for insulation, harnessing, strain relief, and identification purposes for residential, commercial and industrial applications.

Heat Shrink Tubing is designed and tested to meet the most demanding requirements of IEEE, UL, CSA and ANSI as well as many other international standards for performance and long-term reliability.

BENEFITS

- For direct burial applications; withstands severe mechanical requirements.
- Seals, protects and insulates electrical connections and terminations; provides excellent mechanical protection.
- Superior jacket tear resistance and elastomer characteristic allows better conformance over irregular contours without splitting or cracking.
- Accommodates most applications contractors will encounter.
- Excellent sealing efficiency ensuring no moisture ingress as the hot melt adhesive enables fill encapsulation of cables and connectors.
- Provides maximum reliability protecting splices and terminations.
- High impact, abrasion, corrosion and chemical resistance.
- Provides a moisture and soil resistant seal.
- Rated for 600 Volts, 194°F (90°C) continuous use.
- Standard Shrink Ratio: 3:1
- Shrink temperature: 248°F (120°C)

TYPICAL APPLICATIONS

- Splice covers for repair of electrical cables and splice connections.
- Insulation cover or jacket repair on low voltage cables.
- Strain relief and environmental protection.
- HVAC systems for pipes and ducts.

Note: We recommend always using our Heat Shrink Torch for shrinking Thick Wall Heat Shrink Tubing. A torch used for sweating copper tubing will not work and could burn a hole in the shrink tubing!

THICK WALL HEAT SHRINK TUBING — FOR DIRECT BURIAL

- UL Listed for direct burial. File Number: E123896.
- Meets the requirements of the 2017 National Electrical Code: Articles 110.14(B), 300.5(E) and 300.50(D).
- Installs and shrinks easily for labor savings. Most effective when insulating over large transitions.
- 3:1 Shrink ratio enables wider cable range and fewer tubing sizes.
- Excellent abrasion, corrosion and environmental resistance properties.
- UV and fungi resistant.

Thick Wall Heat Shrink Tubing (HST) is used to dielectrically insulate and encapsulate electrical connections. The HST internal coating has an adhesive and sealant that melts when the tubing is heated to provide a moisture and soil resistant seal. The standard color is black.



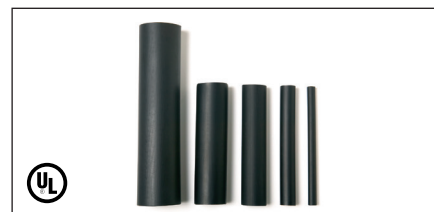
Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
HST1410	10170	Heat Shrink Tubing: Conductor Size — #14 AWG to 10 AWG, Shrink Range — .36-inch to .12-inch; includes six (6) 8-Inch Pieces per Package	BG	6	BG	12	72	6	Yes	5
HST84	10171	Heat Shrink Tubing: Conductor Size — #6 AWG to 2 AWG, Shrink Range — .75-inch to .24-Inch; includes six (6) 8-inch Pieces per Package	BG	6	BG	12	72	6	Yes	7
HST23/0	10172	Heat Shrink Tubing: Conductor Size — #1/0 AWG to 3/0 AWG, Shrink Range — 1.10-inch to .35-inch; includes six (6) 8-Inch Pieces per Package	BG	6	BG	12	72	6	Yes	9
HST2/0300	10173	Heat Shrink Tubing: Conductor Size — 2/0 AWG to 350 MCM, Shrink Range — 1.50-inch to .47-inch; includes four (4) 8-Inch Pieces per Package	BG	4	BG	12	72	6	Yes	10
HST300650	10174	Heat Shrink Tubing: Conductor Size — 250 MCM to 500 MCM, Shrink Range — 2.0-inch to .63-Inch; includes three (3) 12-inch Pieces per Package	BG	3	BG	12	72	6	Yes	13

BULK THICK WALL HEAT SHRINK TUBING — FOR DIRECT BURIAL

Our Bulk Heat Shrink Tubing is used for direct burial and is the same quality tubing as our popular packaged HST Thick Wall Tubing. Available in cut lengths from 2" up to 48".

Please specify the length by adding the correct length in inches to the end of the part number. Example: One (1) 13" piece of 14 AWG to 10 AWG tubing; E00-902-013.

Note: All Bulk Tubing is quoted per inch.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Conductor Size: 1 AWG / 3/0 AWG										
E00-901-0__*	n/a	Thick Wall Tubing	EA	1	BN	0	0	1	No	1
E00-901-005	13911	Thick Wall Tubing: One (1) 5-inch Piece	EA	1	BN	0	0	1	No	1
E00-901-006	13912	Thick Wall Tubing: One (1) 6-inch Piece	EA	1	BN	0	0	1	No	1
E00-901-008	13913	Thick Wall Tubing: One (1) 8-inch Piece	EA	1	BN	0	0	1	No	1
E00-901-009	13914	Thick Wall Tubing: One (1) 9-inch Piece	EA	1	BN	0	0	1	No	1
E00-901-010	13915	Thick Wall Tubing: One (1) 10-inch Piece	EA	1	BN	0	0	1	No	1
E00-901-012	13916	Thick Wall Tubing: One (1) 12-inch Piece	EA	1	BN	0	0	1	No	1
E00-901-024	13918	Thick Wall Tubing: One (1) 24-inch Piece	EA	1	BN	0	0	1	No	1
E00-901-036	13919	Thick Wall Tubing: One (1) 36-inch Piece	EA	1	BN	0	0	1	No	1
E00-901-048	13920	Thick Wall Tubing: One (1) 48-inch Piece	EA	1	BN	0	0	1	No	1

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

BULK THICK WALL HEAT SHRINK TUBING (CONTINUED)

Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Conductor Size: 14 AWG / 10 AWG										
E00-902-0__*	n/a	Thick Wall Tubing	EA	1	BN	0	0	1	No	1
E00-902-006	13925	Thick Wall Tubing: One (1) 6-inch Piece	EA	1	BN	0	0	1	No	1
E00-902-008	13926	Thick Wall Tubing: One (1) 8-inch Piece	EA	1	BN	0	0	1	No	1
E00-902-009	13927	Thick Wall Tubing: One (1) 9-inch Piece	EA	1	BN	0	0	1	No	1
E00-902-012	13928	Thick Wall Tubing: One (1) 12-inch Piece	EA	1	BN	0	0	1	No	1
E00-902-024	13929	Thick Wall Tubing: One (1) 24-inch Piece	EA	1	BN	0	0	1	No	1
E00-902-048	13931	Thick Wall Tubing: One (1) 48-inch Piece	EA	1	BN	0	0	1	No	1
Conductor Size: 6 AWG / 2 AWG										
E00-903-0__*	n/a	Thick Wall Tubing	EA	1	BN	0	0	1	No	1
E00-903-006	13937	Thick Wall Tubing: One (1) 6-inch Piece	EA	1	BN	0	0	1	No	1
E00-903-008	13938	Thick Wall Tubing: One (1) 8-inch Piece	EA	1	BN	0	0	1	No	1
E00-903-009	13939	Thick Wall Tubing: One (1) 9-inch Piece	EA	1	BN	0	0	1	No	1
E00-903-010	13940	Thick Wall Tubing: One (1) 10-inch Piece	EA	1	BN	0	0	1	No	1
E00-903-012	13941	Thick Wall Tubing: One (1) 12-inch Piece	EA	1	BN	0	0	1	No	1
E00-903-024	13943	Thick Wall Tubing: One (1) 24-inch Piece	EA	1	BN	0	0	1	No	1
E00-903-048	13945	Thick Wall Tubing: One (1) 48-inch Piece	EA	1	BN	0	0	1	No	1
Conductor Size: 2/0 AWG / 350 MCM										
E00-904-0__*	n/a	Thick Wall Tubing	EA	1	BN	0	0	1	No	1
E00-904-006	13949	Thick Wall Tubing: One (1) 6-inch Piece	EA	1	BN	0	0	1	No	1
E00-904-008	13950	Thick Wall Tubing: One (1) 8-inch Piece	EA	1	BN	0	0	1	No	1
E00-904-009	13951	Thick Wall Tubing: One (1) 9-inch Piece	EA	1	BN	0	0	1	No	1
E00-904-012	13952	Thick Wall Tubing: One (1) 12-inch Piece	EA	1	BN	0	0	1	No	1
E00-904-024	13953	Thick Wall Tubing: One (1) 24-inch Piece	EA	1	BN	0	0	1	No	1
E00-904-030	13954	Thick Wall Tubing: One (1) 30-inch Piece	EA	1	BN	0	0	1	No	1
E00-904-048	13955	Thick Wall Tubing: One (1) 48-inch Piece	EA	1	BN	0	0	1	No	1
Conductor Size: 250 MCM / 500 MCM										
E00-905-0__*	n/a	Thick Wall Tubing	EA	1	BN	0	0	1	No	1
E00-905-006	13957	Thick Wall Tubing: One (1) 6-inch Piece	EA	1	BN	0	0	1	No	1
E00-905-008	13958	Thick Wall Tubing: One (1) 8-inch Piece	EA	1	BN	0	0	1	No	1
E00-905-009	13959	Thick Wall Tubing: One (1) 9-inch Piece	EA	1	BN	0	0	1	No	1
E00-905-012	13960	Thick Wall Tubing: One (1) 12-inch Piece	EA	1	BN	0	0	1	No	1
E00-905-024	13963	Thick Wall Tubing: One (1) 24-inch Piece	EA	1	BN	0	0	1	No	1
E00-905-048	13965	Thick Wall Tubing: One (1) 48-inch Piece	EA	1	BN	0	0	1	No	1

HEAT SHRINK TORCH

Recommended for shrinking Thick Wall Heat Shrink Tubing and for use with all our Splice Kits. The trigger-start ignition starts fast and easy. Features a fully adjustable regulator valve and air inlet port for adjustable flame settings.

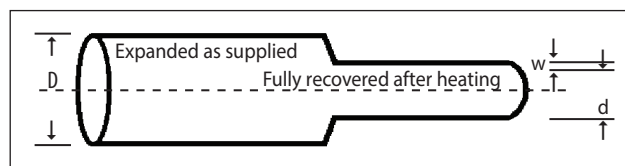
Connects directly to a standard 14.1 oz. propane tank (not included).



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
HST-T1	12200	Heat Shrink Torch	EA	1	BX	20	20	1	No	2

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

Refer to the table shown below to select the Heat Shrink Tubing size which will shrink to fit snugly over the component to be covered. If recovery is restricted the resulting wall thickness will be less than specified.



DIMENSIONS

	Expanded		Recovered				Application Range for General Use		600 / 1000 V Single Conductor Size
	Internal Diameter (MIN) D		Internal Diameter (MAX) d						
Part Number	Inches	MM	Inches	MM	Inches	MM	Inches	MM	AWG / MCM
HST1410	0.35	8.9	0.12	3.0	0.07	1.8	.15 - .3	3.5 - 8	#14 - #10
HST84	0.75	19.1	0.24	6.1	0.12	3.0	.25 - .65	6.5 - 16.5	#6 - #2
HST23/0	1.10	27.9	0.35	8.9	0.12	3.0	.4 - .95	10 / 24	#1 - 3/0
HST2/0300	1.50	38.1	0.47	11.9	0.14	3.6	.5 - 1.4	13 - 35	2/0 - 350
HST300650	2.0	50.8	0.63	16	0.14	3.6	.7 - 1.75	17.5 - 44	250 - 500

SPECIFICATIONS

Property	Typical Performance
Physical	
Tensile Strength	2100 psi (14.5 MPa)
Specific Gravity	1.1
Heat Shock (4 hrs at 437°F (225°C))	No cracking or flowing
Low Temperature Flexibility (4 hrs at -67°F (-55°C))	No cracking
Electrical	
Dielectric Strength	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60 Hz, 1 min)	No breakdown, 24kV-1 min, 15kV-4 hrs
Volume Resistivity	10 ¹⁶ ohm-cm
Chemical	
Fluid Resistance	Good to Excellent
Copper Corrosion	No corrosion
Water Absorption	0.1%
Fungus Resistance	No growth
Adhesive	
Adhesive Softening Point	197°F (92°C) +/- 41°F (5°C)
Adhesive Lap Shear	125 psi (0.875 MPa)
Adhesive Blocking (86°F (30°C))	No blocking
Water Penetration	No penetration after 236 hrs (min) of continuous immersion

ACCESSORIES

- **AIR CONDITIONER WHIPS**
- **POWER/APPLIANCE CORDS**
- **RANGE AND DRYER CORDS**

**CUSTOM CAPABILITIES
AVAILABLE! SEE PAGE 97**

ACCESSORIES

AIR CONDITIONER WHIPS

- Meets the requirements of the 2017 National Electrical Code: Articles 310.10(C)(H)(2) and (4), Table 310.15(B)(2)(A), 356.10(1), (2) and (3), 350.22(A), 350.30(A), 356.10, 356.20, 440.6 and 440.31.
- Labor and Time Savings! Cost-effective Non-Metallic AC Whips save the contractor time and money.
- Reducing washers included.
- Convenient packaging of ten (10) or twenty (20) AC Whips per Carton.
- UL Listed. File Number: E87199.

Designed to save the contractor installation time and labor, our Air Conditioner Whips are typically used to connect the Central Air Conditioner Compressor to the AC disconnect box. Air Conditioner Whips include one (1) Straight and one (1) 90° Connector. Three (3) Conductors are included in 1/2" or 3/4" Non-Metallic Liquid Tight Conduit using either 8 or 10 AWG THHN Conductors.

We will also build "custom" Air Conditioner Whips to your specifications in any length using UL Listed components. Contact our Inside Sales Department (800.336.1976 or sales@engproducts.com) for more specific information.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	ShipWt (Lbs)
ACWNM1043-1RA	11202	AC Whip: 4-FT, 1/2", One (1) Straight and One (1) Right Angle Connector, Three (3) 10 AWG Stranded - Red, Black, Green	EA	1	BRL	20	20	1	No	47
ACWNM1063-1RA	11204	AC Whip: 6-FT, 1/2", One (1) Straight and One (1) Right Angle Connector, Three (3) 10 AWG Stranded - Red, Black, Green	EA	1	BRL	20	20	1	No	49
ACWNM843-1RA	11205	AC Whip: 4-FT, 3/4", One (1) Straight and One (1) Right Angle Connector, Two (2) 8 AWG Stranded - Red, Black; One (1) 10 AWG Stranded - Green	EA	1	BRL	20	20	1	No	49
ACWNM863-1RA	11208	AC Whip: 6-FT, 3/4", One (1) Straight and One (1) Right Angle Connector, Two (2) 8 AWG Stranded - Red, Black; One (1) 10 AWG Stranded - Green	EA	1	BRL	10	10	1	No	36
ACWNM843-1RA-1/2	11214	AC Whip: 4-FT, 1/2", One (1) Straight and One (1) Right Angle Connector, Two (2) 8 AWG Stranded - Red, Black; One (1) 10 AWG Stranded - Green	EA	1	BRL	20	20	1	No	49
ACWNM863-1RA-1/2	11213	AC Whip: 6-FT, 1/2", One (1) Straight and One (1) Right Angle Connector, Two (2) 8 AWG Stranded - Red, Black; One (1) 10 AWG Stranded - Green	EA	1	BRL	20	20	1	No	50

POWER/APPLIANCE CORDS

- UL Listed.
- Meets the requirements of the 2017 National Electrical Code: Articles 422.16(B)(1) and (2).

SPT Flat and SJT Round Power/Appliance Cords are used for applications such as installation of garbage disposals, dishwashers or similar appliances. These cords can also be used for repairs of appliances, power tools or other electrical equipment.

The cords are 16 AWG or 14 AWG 3 wire heavy-duty vinyl conductors. One end is pre-stripped at the factory, the other end has a straight or right angle grounded male plug.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
SPT 14/3 Flat Cord										
10950	10950	3-FT: Straight Plug, 15 AMP - Beige	EA	1	BX	25	25	25	Yes	9
10953	10953	6-FT: Straight Plug, 15 AMP - Beige	EA	1	BX	25	25	25	Yes	17
10956	10956	9-FT: Straight Plug, 15 AMP - Beige	EA	1	BX	25	25	25	Yes	25
SPT 16/3 Flat Cord										
PCR3	10178	3-FT: Right Angle Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	8
PCR6	10181	6-FT: Right Angle Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	12
PCR8	10182	8-FT: Right Angle Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	13
PCS3	10179	3-FT: Straight Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	8
PCS4	10183	4-FT: Straight Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	8
PCS6	10184	6-FT: Straight Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	12
PCS8	10185	8-FT: Straight Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	13
PCS12	10169	12-FT: Straight Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	22
SJT 16/3 Round Cord										
PSS3	10186	3-FT: Straight Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	8
PSS6	10187	6-FT: Straight Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	12
PSS8	10188	8-FT: Straight Plug, 13 AMP - Black	EA	1	BX	25	25	25	Yes	13
RSS3	10219	3-FT: Receptacle, 15 AMP - Black	EA	1	BX	25	25	25	Yes	12

RANGE AND DRYER CORDS

- Meets Canadian Standards Association (CSA) Approval.
- Meets the requirements of the 2017 National Electrical Code: Articles 220.54, 422.16(B)(3)(4) and 422.33(A) and (B).
- Heavy-duty terminals ensure an excellent power quality connection.
- Right angle plug for fit-to-wall.
- Strain Relief protects Range and Dryer Cord from damage.



Catalog Number	UPC Number	Description	Order Unit	Unit Qty	Unit Pkg	Units/ Case	TL Case Qty	Min Order Qty	MM Req	Ship Wt (Lbs)
Range Cords										
40000	40000	Range Cord: 4-FT, SRDT 6/2 and 8/1, 3 Wire, 50 AMP - Grey	EA	1	BX	16	16	1	No	27
40001	40001	Range Cord: 6-FT, SRDT 6/2 and 8/1, 3 Wire, 50 AMP - Grey	EA	1	BX	16	16	1	No	35
40010	40010	Range Cord: 4-FT, SRDT 6/2 and 8/2, 4 Wire, 50 AMP - Black	EA	1	BX	12	12	1	No	33
40011	40011	Range Cord: 6-FT, SRDT 6/2 and 8/2, 4 Wire, 50 AMP - Black	EA	1	BX	12	12	1	No	38
Dryer Cords										
40020	40020	Dryer Cord: 4-FT, SRDT 10/3, 3 Wire, 30 AMP - Grey	EA	1	BX	32	32	1	No	35
40021	40021	Dryer Cord: 6-FT, SRDT 10/3, 3 Wire, 30 AMP - Grey	EA	1	BX	32	32	1	No	51
40030	40030	Dryer Cord: 4-FT, SRDT 10/4, 4 Wire, 30 AMP - Black	EA	1	BX	16	16	1	No	27
40031	40031	Dryer Cord: 6-FT, SRDT 10/4, 4 Wire, 30 AMP - Black	EA	1	BX	16	16	1	No	35

UNITS OF MEASURE KEY Order Unit: The Unit to be ordered; Unit Qty: Number of pieces in each Unit; Unit Pkg: Unit Packages contained in the case - Packaging types - BG (Bag), BRL (Barrel), BX (Box), BN (Bulk), PKG (Package), EA (Each), RL (Roll), LB (Pound), C (Hundred), M (Thousand); Units/Case: Unit packages contained in the Case; TL Case Qty: The total number of items in each Master Case; Min Order Qty: The smallest Unit that can be ordered; MM Req: Must order multiples of the Unit in the stated quantities; Ship Wt (Lbs): Total weight of the units per Carton

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10004	10004	75	15247	15247	41	17090	17090	60	BSK4	10709	82	EPW1264S-1/2	10289	52
10008	10008	75	15676	15676	45	17100	17100	59	DRBSK	11499	83	EPW1264SAD	10559	53
10009	10009	74	15680	15680	41	17101	17101	59	DRBSK1	11500	83	EPW1462	10303	52
10010	10010	74	15681	15681	41	17103	17103	59	DRBSK3	11501	83	EPW1462AD	10560	52
10011	10011	74	15702	15702	66	17183	17183	60	E00-901-0	N/A	85	EPW1462S	10333	52
10016	10016	74	15720	15720	67	17184	17184	60	E00-901-005	13911	85	EPW1462SAD	10561	53
10041	10041	75	15725	15725	67	17185	17185	60	E00-901-006	13912	85	EPW1463	10307	52
10062	10062	77	15730	15730	65	17186	17186	60	E00-901-008	13913	85	EPW1463-1/2	10309	52
10065	10065	77	15731	15731	65	17194	17194	60	E00-901-009	13914	85	EPW1463-1/2-IC	84012	50
10950	10950	90	15752	15752	66	17195	17195	60	E00-901-010	13915	85	EPW1463-1/2-BGG-IC	84042	50
10953	10953	90	15760	15760	66	17196	17196	60	E00-901-012	13916	85	EPW1463A	10317	53
10956	10956	90	15800	15800	39	17197	17197	60	E00-901-024	13918	85	EPW1463AD	10369	52
14050	14050	30	15800B	15850	39	17199	17199	60	E00-901-036	13919	85	EPW1463AD-1/2-IC	84026	50
14050B	14052	30	15801	15801	39	17201	17201	61	E00-901-048	13920	85	EPW1463AD-1/2-BGG-IC	84043	51
14051	14051	30	15801B	15851	39	17202	17202	61	E00-902-0	N/A	86	EPW1463ADP2-HNG	10531	53
14051B	14053	30	15805B	15855	39	17204	17204	61	E00-902-006	13925	86	EPW1463S	10334	52
14055	14055	30	15806	15806	39	17206	17206	61	E00-902-008	13926	86	EPW1463S-1/2	10575	52
14056	14056	30	15806B	15856	39	17230	17230	70	E00-902-009	13927	86	EPW1463S-1/2-IC	84014	50
14057	14057	30	15807B	15857	39	17300	17300	61	E00-902-012	13928	86	EPW1463S-1/2-BGG-IC	84044	51
14060	14060	30	15810B	15860	39	17301	17301	61	E00-902-024	13929	86	EPW1463SA	10345	53
14065	14065	30	15812	15812	39	17303	17303	61	E00-902-048	13931	86	EPW1463SAD	10450	53
14066	14066	30	15815	15815	39	17800	17800	62	E00-903-0	N/A	86	EPW1463SAD-1/2-IC	84028	50
14067	14067	30	15905	15905	41	17860	17860	62	E00-903-006	13937	86	EPW1463SAD-1/2-BGG-IC	84045	51
14070	14070	26	15913	15913	35	17893	17893	62	E00-903-008	13938	86	EPW1464	10308	52
14070B	14072	26	15915	15915	35	20003	20003	75	E00-903-009	13939	86	EPW1464-1/2	10313	52
14071	14071	26	15930	15930	35	20004	20004	75	E00-903-010	13940	86	EPW1464-1/2-IC	84013	50
14073	14073	26	15931	15931	35	20008	20008	75	E00-903-012	13941	86	EPW1464-1/2-BOGG-IC	84046	50
14073B	14075	26	15973	15973	35	20009	20009	74	E00-903-024	13943	86	EPW1464A	10326	53
14074	14074	26	15975	15975	35	20010	20010	74	E00-903-048	13945	86	EPW1464AD	10442	52
14074B	14078	26	15980	15980	38	20011	20011	74	E00-904-0	N/A	86	EPW1464AD-1/2-IC	84027	50
14076	14076	26	15980B	15983	38	20016	20016	74	E00-904-006	13949	86	EPW1464AD-1/2-BOGG-IC	84047	51
14080	14080	31	15981	15981	38	20019	20019	75	E00-904-008	13950	86	EPW1464ADP2-HNG	10532	53
14082	14082	28	15981B	15984	38	20020	20020	75	E00-904-009	13951	86	EPW1464S	10335	52
14083	14083	28	15982	15982	38	20025	20025	75	E00-904-012	13952	86	EPW1464S-1/2	10577	52
14084	14084	28	15982B	15985	38	20026	20026	75	E00-904-024	13953	86	EPW1464S-1/2-IC	84015	50
14085	14085	31	16010	16010	68	20029	20029	75	E00-904-030	13954	86	EPW1464S-1/2-BOGG-IC	84048	51
14087	14087	28	16022	16022	68	20035	20035	75	E00-904-048	13955	86	EPW1464SA	10346	53
14088	14088	28	16023	16023	68	20036	20036	75	E00-905-0	N/A	86	EPW1464SAD	10529	53
14089	14089	28	16100	16100	46	20041	20041	75	E00-905-006	13957	86	EPW1464SAD-1/2-IC	84029	50
14090	14090	30	16110	16110	68	20051	20051	79	E00-905-008	13958	86	EPW1464SAD-1/2-BOGG-IC	84049	51
14091	14091	31	16350	16350	68	20052	20052	79	E00-905-009	13959	86	EPW1662	10300	52
14092	14092	31	16353	16353	68	20053	20053	79	E00-905-012	13960	86	EPW1662A	10323	53
14095	14095	31	16500	16500	46	20062	20062	77	E00-905-024	13963	86	EPW1662AD	10566	52
14096	14096	31	16501	16501	46	20065	20065	77	E00-905-048	13965	86	EPW1662S	10330	52
15000	15000	40	16502	16502	46	20067	20067	76	E04-002-004	14025	71	EPW1663	10301	52
15001	15001	40	16510	16510	46	20068	20068	76	EPD1	10101	16	EPW1663-1/2-IC	84016	50
15002	15002	40	16512	16512	46	20070	20070	76	EPD5	10102	16	EPW1663-1/2-BGG-IC	84050	50
15005	15005	40	16514	16514	46	20074	20074	76	EPD5B	10105	16	EPW1663A	10324	53
15006	15006	40	16520	16520	46	20075	20075	76	EPW1262-1/2-IC	84010	50	EPW1663AD	10517	52
15007	15007	40	16522	16522	46	20086	20086	74	EPW1262SA	10347	53	EPW1663AD-1/2-IC	84030	50
15015	15015	42	16524	16524	46	20087	20087	74	EPW1263	10315	52	EPW1663AD-1/2-BGG-IC	84051	51
15016	15016	42	16526	16526	46	20088	20088	74	EPW1263-1/2	11600	52	EPW1663S	10331	52
15020	15020	42	16531	16531	45	40000	40000	90	EPW1263S-1/2-IC	84011	50	EPW1663S-1/2-IC	84018	50
15025	15025	42	16536	16536	45	40001	40001	90	EPW1263-1/2-BGG-IC	84038	50	EPW1663S-1/2-BGG-IC	84052	51
15031	15031	42	16540	16540	44	40010	40010	90	EPW1263A	10319	53	EPW1663SA	10342	53
15045	15045	41	17000	17000	60	40011	40011	90	EPW1263AD	10556	52	EPW1663SAD-1/2-IC	84032	50
15046	15046	41	17005	17005	60	40020	40020	90	EPW1263AD-1/2-IC	84024	50	EPW1663SAD-1/2-BGG-IC	84053	51
15047	15047	41	17010	17010	60	40021	40021	90	EPW1263AD-1/2-BGG-IC	84039	51	EPW1664	10302	52
15049	15049	41	17015	17015	60	40030	40030	90	EPW1263S	10337	52	EPW1664-1/2-IC	84017	50
15050	15050	40	17020	17020	60	40031	40031	90	EPW1263S-1/2	10314	52	EPW1664-1/2-BOGG-IC	84054	50
15051	15051	40	17025	17025	60	ACWNM1043-1RA	11202	89	EPW1263S-1/2-BGG-IC	84040	51	EPW1664A	10325	53
15055	15055	40	17030	17030	60	ACWNM1063-1RA	11204	89	EPW1263SA	10348	53	EPW1664AD	10568	52
15056	15056	40	17031	17031	60	ACWNM843-1RA	11205	89	EPW1263SAD	10557	53	EPW1664AD-1/2-IC	84031	50
15063	15063	42	17032	17032	60	ACWNM863-1RA	11208	89	EPW1263SAD-1/2-IC	84025	50	EPW1664AD-1/2-BOGG-IC	84055	51
15070	15070	41	17033	17033	60	ACWNM843-1RA-1/2	11214	89	EPW1263SAD-1/2-BGG-IC	84041	51	EPW1664S	10332	52
15071	15071	41	17034	17034	60	ACWNM863-1RA-1/2	11213	89	EPW1263SADP1-HN	10548	53	EPW1664S-1/2-IC	84019	50
15075	15075	41	17035	17035	60	BSK1	10705	82	EPW1263SADP2-HNG	10535	53	EPW1664S-1/2-BOGG-IC	84056	51
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EPW1864-1/2-IC	84021	50	RFK4-LED-3350-A	14035	22									
EPW1864-1/2-BGG-IC	84062	50	RFK4-LED-4840	14006	22									
EPW1864A	10322	53	RFK4-LED-4840-A	14007	22									
EPW1864AD	10280	52	RFK4-LED-4850	14004	22									
EPW1864AD-1/2-IC	84035	50	RFK4-LED-4850-A	14005	22									
EPW1864AD-1/2-BGG-IC	84063	51	RFK4-T8LED-L1	14008	22									
EPW1864S	10329	52	RFK4-T8LED-L2	14010	22									
EPW1864S-1/2-IC	84023	50	RFK4-T8LED-L3	14009	22									
EPW1864S-1/2-BGG-IC	84064	51	RFK4-LENS	14039	22									
EPW1864SA	10340	53	RFK8-LED-6640	14030	22									
EPW1864SAD	10368	53	RFK8-LED-6640-A	14031	22									
EPW1864SAD-1/2-IC	84037	50	RFK8-LED-6650	14032	22									
EPW1864SAD-1/2-BGG-IC	84065	51	RFK8-LED-6650-A	14033	22									
EPW1864SADP2-HNG	10534	53	RFK8-LED-9640	14028	22									
EPW18103	10400	54	RFK8-LED-9640-A	14029	22									
EPW18103S	10401	54	RFK8-LED-9650	14014	22									
EPW18104	10402	54	RFK8-LED-9650-A	14015	22									
EPW18104S	10403	54	RFK8-T8LED-L2	14012	22									
GC	10052	79	RFK8-T8LED-L4	14011	22									
GFF-DC4	14251	15	RFK8-T8LED-L6	14013	22									
GFF-DC8	14252	15	RFK8-LENS	14038	22									
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GFF-DF4	14453	15	SH10	10251	17									
GFF-DF8	14454	15	SH12	10252	17									
GFF-DR2	14334	15	SMH	10726	16									
GFF-DR4	14253	15	TMH	10725	16									
GFF-DR8	14254	15	TY16	10150	16									
GFF-FSSK	14256	15	TY16G	10152	16									
GFF-L2C	14336	15	TY18G	10151	16									
GFF-L2SS	14337	15	TY18G-50B	12000	16									
GFF-L4C	14240	15	UFC2B	10711	82									
GFF-L4SS	14239	15	UFC3/4	10703	83									
GFF-L8C	14250	15	UFS2	10714	83									
GFF-L8SS	14249	15	W-DC4	14238	15									
GFF-MH	14241	15	W-DF4	50004	15									
GFF-MHS	14352	15	W-L4SS	50003	15									
GFF-MH4S	50005	15	W-VH00K	50002	15									
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GFF-TPS-S	14245	15												
GSC	10053	79												
GSH	10051	79												
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HST1410	10170	85												
HST2/0300	10173	85												
HST23/0	10172	85												

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PRODUCT WARRANTY

GENERAL PRODUCT WARRANTY

Unless otherwise noted, Engineered Products Company (herein known as EPCO) warrants that the products described herein, will be furnished free from defects in material and workmanship for one (1) year. Any exceptions to this Warranty Statement will be detailed within the respective warranty section in this product catalog, noted on the product itself, or the product packaging.

EPCO's sole obligation for any breach of warranty under the terms herein shall be, at our option, to repair or provide replacement for the Product to which such warranty is breached, or to return all payments made with respect to such product. Any product(s) that are deemed to be defective must be specified by the Purchaser in a written notice to EPCO's Warranty Department within one (1) year after receipt of such goods. Under no circumstances will EPCO be liable for loss of profits or incidental, indirect, consequential or special damages of any kind beyond the replacement cost of the defective merchandise.

EPCO shall not be liable for any losses arising from governmental action, an act of God, or the result of war, riot, strikes, civil commotion, sovereign conduct, or the act or conduct of any person or persons not party to or associated with EPCO.

LED LUMINAIRE PRODUCTS LIMITED WARRANTY

Engineered Products Company (herein known as EPCO) warrants at its sole option, after a failure is confirmed as a true defect in materials or workmanship, EPCO will replace or refund, any of the following LED Luminaire Products for a period of five (5) years from original purchase. This warranty statement applies to the original purchaser and is not transferable. If the product fails before the 5-year period expires, please return this product with your original invoice to: *Engineered Products Company, Attention: Return Materials Department, 5401 Smetana Drive, Minnetonka, Minnesota 55343.*

This Limited Warranty applies to the following products: LED Strips, T5 and T8 LED Lamps, and T5 and T8 Fluorescent Linear Luminaires; LED RetroFit Conversion Kits for Strip-Type Fixtures; TIGER 100-Watt and 60-Watt Temporary LED Luminaires; ProSeries LED Luminaire and LED Upgrade; ProSeries Elite Ceiling/Pendant and Wall Mount LED Utility Luminaire; 9-Watt LED Luminaire (3-Year Warranty); ProSeries "Junior" LED Utility Lamp, Lamp Upgrade, and Utility Luminaire; and Motion Sensing LED Closet Luminaire.

Note: The Original Purchaser is identified as the first initial installation completed by the Building Owner.

This Limited Warranty does not apply to any of the following:

- Disassembly of LED Driver, LED Strip, or Luminaire Housing by the end-user or the end-user's agent.
- Severe damage or deformation to the appearance of the LED Driver, LED Strip, or Luminaire.
- Damage to the LED Driver or LED Strip input (+) or output (-) conductors.
- LED Driver or Luminaire identification codes and/or other serial numbers that have been erased, altered, modified, or damaged.
- Damage to the LED Driver, LED Strip, or Luminaire caused by natural disasters.
- Must be installed per installation instructions and local building code.
- Any Luminaire, Luminaire Housing, or LED RetroFit Conversion Kit that was incorrectly installed by drilling holes, puncturing, piercing or any other means that will alter the product's integrity.
- Damage caused by the use of parts, components, and/or other equipment(s) that is not compatible, suitable, or unauthorized by EPCO for use with any Luminaire or LED RetroFit Conversion Kit.
- Damage resulting from the use of any Luminaire or LED RetroFit Conversion Kit in what EPCO, at its sole discretion, considers extreme applications.
- Product damage as determined by EPCO to be caused by a crash, impact, or obvious signs of abuse to any Luminaire or LED RetroFit Conversion Kit.
- For Fluorescent Luminaires only, the Ballast Warranty is limited to the first initial installation completed by the Building Owner. Contact the ballast manufacturer directly for more specific information on their warranty policy and procedures.
- The Chemical Resistance of Plastics Chart (posted on EPCO's website) provides an overview of those chemical compounds where these luminaires should not be installed.
- There are no charge-backs for any type of labor allowance required to remove, re-install, or re-power any Luminaire or LED RetroFit Conversion Kit and/or the replacement with a new luminaire or kit.

RETURN MATERIALS AUTHORIZATION POLICY

To obtain a replacement or a credit under this warranty, the Purchaser must contact EPCO Inside Sales within the specified warranty period (five years, three years, or one year, respectively) to obtain a Return Materials Authorization (RMA) form and return shipping instructions for the defective product. EPCO shall have no responsibility for any product deemed out of warranty. Under no circumstances shall EPCO be liable for any loss or damage, whether direct or indirect, incidental, consequential, special or otherwise, arising out of or relating to the use of, or the inability to use the product(s) in excess of the cost for replacement of any of the aforementioned product(s) proven to be defective during the defined warranty period.

THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR ANY CLAIM, WHETHER IN CONTRACT, TORT, OR OTHERWISE, AND IS IN LIEU OF ANY OTHER WARRANTY, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY WARRANTY OF NON-INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHT OF THIRD PARTIES. ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED.

THIS WARRANTY IS ALSO GOVERNED BY OUR TERMS AND CONDITIONS OF SALE AND IS WITHOUT PREJUDICE TO THE WARRANTY CLAIM PROVIDED HEREIN OF SUCH TERMS OF SALE AND DELIVERY.

PRODUCT WARRANTY

PROSERIES LED UTILITY LUMINAIRE AND LED UPGRADE — Installation Requirement

For 120 VOLT OPERATION ONLY! If the working environment of the ProSeries LED Utility Luminaire and LED Utility Luminaire Upgrade will create a class 3 or greater surge voltage, the Purchaser/Installer must install a Surge Protector. A surge suppressor (TVSS device) prevents harmful surge voltages from damaging or destroying the ProSeries LED Utility Luminaire and/or LED Utility Luminaire Upgrade.

Select a surge suppressor that includes the following (minimum) features:

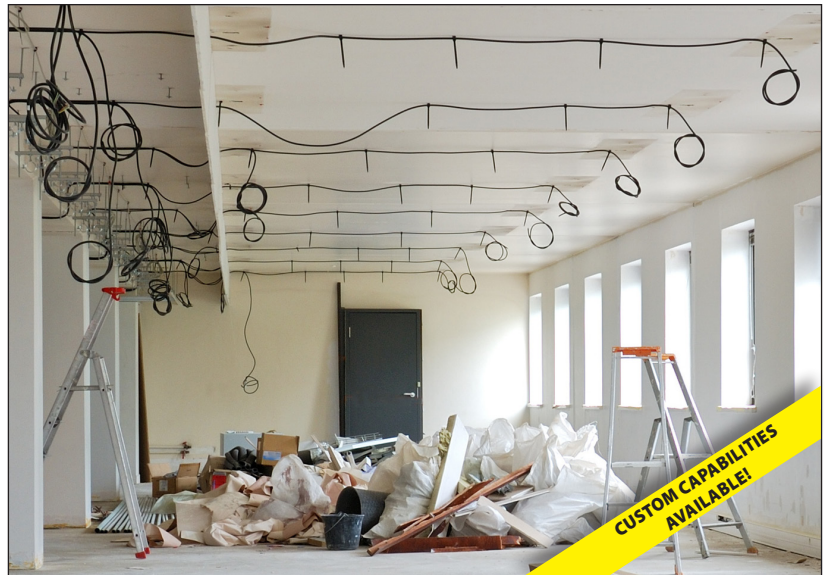
- Low let-through under IEEE Category B3, C1 and C3 test waves
- Independently tested to the published surge current ratings (per phase)
- Internal fuses
- Internal monitoring features (for both open and shorted MOV failures)
- Electrical noise filtering between 55dB at 100 kHz
- A small footprint design for more effective installation.
- Listed under UL 1449, UL 1283, and meets CSA approval.

Note: Failure to install a Surge Protection device prior to the installation and use of the ProSeries LED Utility Luminaire and/or LED Utility Luminaire Upgrade will automatically VOID the warranty and Engineered Products Company is not responsible for any or all reinstallation activities, cost, or expenses associated with the use of the ProSeries LED Utility Luminaire and/or LED Utility Luminaire Upgrade or replacement of the ProSeries LED Utility Luminaire and/or LED Utility Luminaire Upgrade.

Continued from Inside Front Cover...

Our knowledgeable inside sales team, purchasing and production departments work closely with your staff to develop unique “application” solutions that meet your specific project requirements. We will meet your stringent development timelines and have a state-of-the-art manufacturing facility that allows for rapid prototype production and analysis.

Let us be a part of your development team and eliminate cumbersome transactions, long lead-times, and expensive transportation costs from China-based companies. We are the one-stop source for your “custom” wire-related applications. Our resources and experience provide you with innovative, solutions combined with quality UL and ETL listed and recognized materials.



Custom made “powered” Drop Cords for a newly renovated commercial office building.



EPCO 4-foot LED vapor tight luminaires powered by our 277 Volt Illumination Control Fixture Whips.

WHAT'S IN IT FOR YOU?

Competitively priced, quality products, with customer service and delivery dates that meet your requirements. If you don't see exactly what you need in our catalog, call or email our Inside Sales Department at 800-336-1976 or sales@engproducts.com your product request today.

— Jim Anderson, President,
Engineered Products Company

Distributed By:



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