

WLS27 LED Strip Light - PWM Dimmable



Instruction Manual

Banner's WLS27 LED Strip Light has a sturdy aluminum housing and is encased in a shatterproof, UV-stabilized, copolyester shell, making it ideal for harsh indoor and outdoor applications.

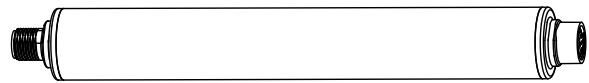
- Intensity can be controlled from 0 to 100% using Pulse Width Modulation (PWM) on an input control wire
- Rugged, water-resistant IP69K rating
- Available in eight lengths from 145 mm to 1130 mm
- Daisy chain power to multiple lights to control intensity simultaneously
- Automatic temperature protection built into the unit. Above 50 °C, the light dims to manage heat and protect product lifetime



For PWM dimming, use with the LC65 Dimmer Module. For more information, refer to the LC65 LED Dimmer Module datasheet, p/n [177086](#).



Stand-Alone Light or End Light in a Cascade—QD



First or Middle of a Cascade—QD

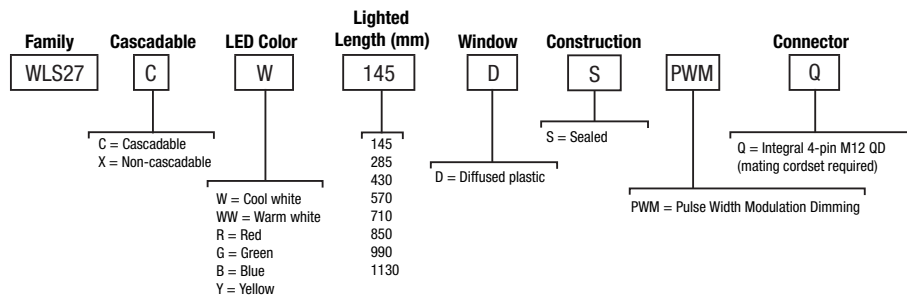
These Work Light Strips are available as either stand-alone models, or as cascade models that can be "daisy-chained" together for a continuous length of lighting, with a minimum of wiring.

Stand-alone models have a male quick disconnect (QD) at one end for power connection and no connections at opposite end. A stand-alone model may be used as the last in the cascade series.

Cascade models have a male quick disconnect (QD) at one end for power connection, and a female QD at the opposite end for connecting to other lights in the cascade. A double-ended accessory cordset must be used between each pair of lights in a cascade.

Use single-ended cordsets between the power source and the QD connection of a stand-alone light or the first light in a cascade. Use double-ended cordsets between lights in a cascade.

Models



| Stand-Alone | Cascade | Lighted Length | Power Connector |
|------------------|------------------|----------------|--|
| WLS27XW145DSPWMQ | WLS27CW145DSPWMQ | 145 mm | Integral 4-pin M12/Euro-style quick disconnect |
| WLS27XW285DSPWMQ | WLS27CW285DSPWMQ | 285 mm | |
| WLS27XW430DSPWMQ | WLS27CW430DSPWMQ | 430 mm | |
| WLS27XW570DSPWMQ | WLS27CW570DSPWMQ | 570 mm | |
| WLS27XW710DSPWMQ | WLS27CW710DSPWMQ | 710 mm | |
| WLS27XW850DSPWMQ | WLS27CW850DSPWMQ | 850 mm | |



| Stand-Alone | Cascade | Lighted Length | Power Connector |
|-------------------|-------------------|----------------|-----------------|
| WLS27XW990DSPWMQ | WLS27CW990DSPWMQ | 990 mm | |
| WLS27XW1130DSPWMQ | WLS27CW1130DSPWMQ | 1130 mm | |

Specifications

Operating Voltage

12 to 30 V dc
Use only with suitable Class 2 power supply (UL) or a SELV power supply (CE).

Pulse Width Modulation (PWM)

Frequency: Up to 1000 Hz
Voltage: 8 to 30 V dc
Current: 4 mA max. per foot

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Light Characteristics

Color: Cool White
Color Temperature (CCT): 6000–7100K
Lumen output: 650 (± 5%) per foot, typical at 25 °C (77 °F)
Luminous efficacy: 90 lumens/Watt typical at 24 V dc at 25 °C (77 °F)
CRI: 85, typical

LED Lifetime

Lumen Maintenance - L70
When operating within specifications, output will decrease less than 30% after 50,000 hours.

Construction

FDA-grade copolyester

Mounting

Bracket LMBWLS27EC included (2 for lights up to 570 mm or 3 for lights 710 mm and longer)

Connections

Integral 4-pin M12 male quick disconnect (QD) (4-pin connecting cordset required)

Storage Temperature

-40 °C to +70 °C (-40 °F to +158 °F)

Operating Temperature

-40 °C to +70 °C (-40 °F to +158 °F)
Light output begins to decrease above 50 °C (122 °F) and will be approximately 65% of max intensity at 60 °C (140 °F) and 30% of max intensity at 70 °C (158 °F)

Application Note

When connecting cascading lights in series it is important not to exceed maximum current limitations:
Maximum length of light at 12 V dc: 1.4 m (4.6 ft)
Maximum length of light at 24 V dc: 3.0 m (9.8 ft)
Maximum length of light at 30 V dc: 3.1 m (10.2 ft)

| Light Length | Typical Current | | | Max. Current | Lumens (Typical @25 °C) |
|--------------|-----------------|---------|---------|--------------|-------------------------|
| | 12 V dc | 24 V dc | 30 V dc | A | Cool White |
| 145 mm | 0.33 A | 0.15 A | 0.12 A | 0.4 | 325 |
| 285 mm | 0.66 A | 0.30 A | 0.24 A | 0.8 | 650 |
| 430 mm | 1.01 A | 0.46 A | 0.36 A | 1.2 | 975 |
| 570 mm | 1.36 A | 0.61 A | 0.48 A | 1.6 | 1300 |
| 710 mm | 1.75 A | 0.77 A | 0.60 A | 2.0 | 1625 |
| 850 mm | 2.13 A | 0.92 A | 0.73 A | 2.4 | 1950 |
| 990 mm | 2.59 A | 1.08 A | 0.85 A | 2.8 | 2275 |
| 1130 mm | 3.04 A | 1.24 A | 0.97 A | 3.2 | 2600 |



Note: Do not spray cable with high-pressure sprayer, or cable damage will result.

Environmental Rating

Rated IEC IP66, IP67, and IP69K, per DIN 40050

Vibration and Mechanical Shock

Vibration 10-55 Hz 1.0 mm p-p amplitude per IEC 60068-2-6
Shock 15G 11 ms duration, half sine wave per IEC 60068-2-27

Certifications



Dimensions

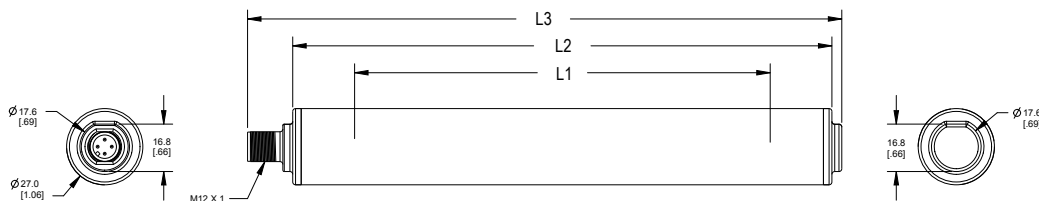


Figure 1. Quick Disconnect Models

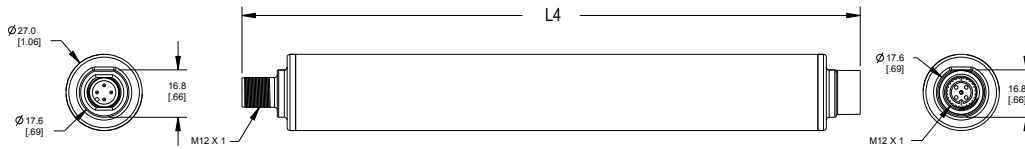


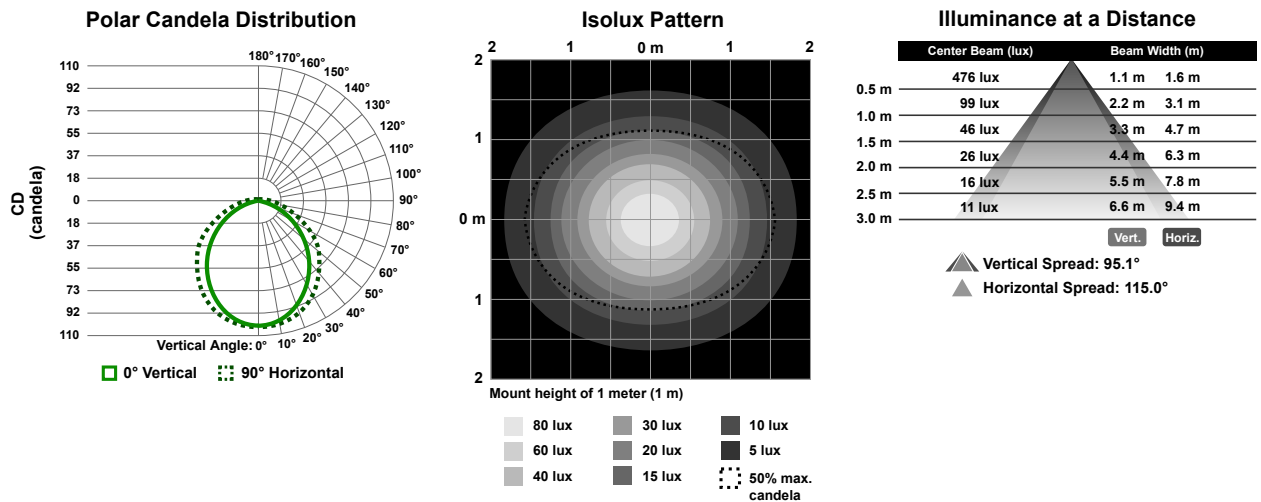
Figure 2. Cascade Models

| Models | L1 | L2 | L3 | L4 |
|---------------|-------------------|-------------------|---------------------|-------------------|
| WLS27..145.. | 145 mm (5.7 in) | 189 mm (7.4 in) | 208.5 mm (8.2 in) | 217 mm (8.5 in) |
| WLS27..285.. | 286 mm (11.3 in) | 330 (13 in) | 349.5 mm (13.8 in) | 358 mm (14.1 in) |
| WLS27..430.. | 427 mm (16.8 in) | 471 mm (18.5 in) | 490.5 mm (13.3 in) | 499 mm (19.6 in) |
| WLS27..570.. | 569 mm (22.4 in) | 612 mm (24.1 in) | 631.5 mm (24.9 in) | 640 mm (25.2 in) |
| WLS27..710.. | 708 mm (27.9 in) | 752 mm (29.6 in) | 771.5 mm (30.4 in) | 780 mm (30.7 in) |
| WLS27..850.. | 849 mm (33.4 in) | 893 mm (35.2 in) | 912.5 mm (35.9 in) | 921 mm (36.2 in) |
| WLS27..990.. | 991 mm (39 in) | 1035 mm (40.8 in) | 1054.5 mm (41.5 in) | 1063 mm (41.8 in) |
| WLS27..1130.. | 1120 mm (44.1 in) | 1164 mm (45.8 in) | 1183.5 mm (46.4 in) | 1192 mm (46.9 in) |

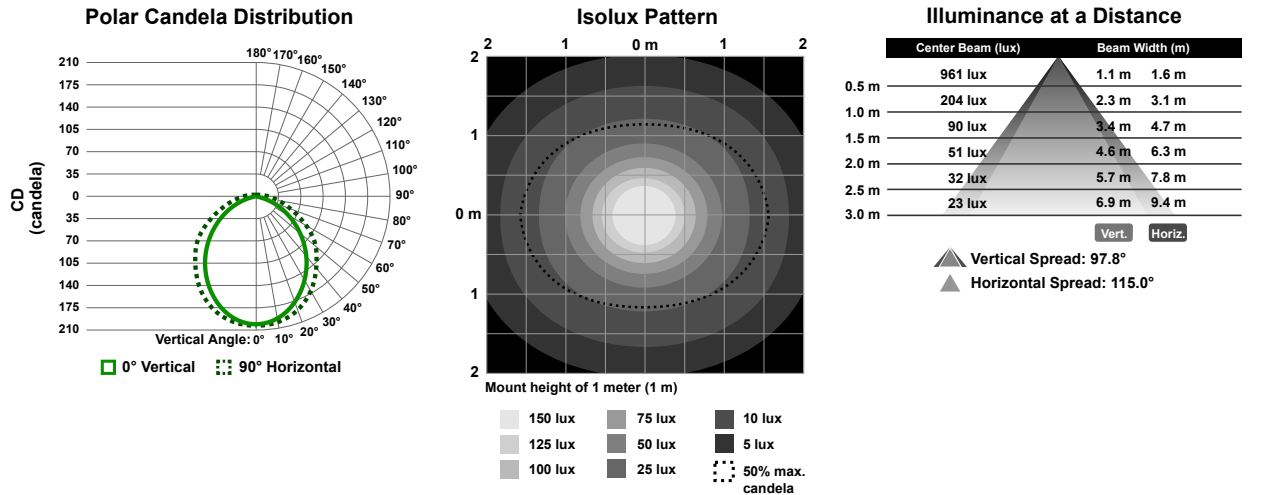
Performance

For models with heavy diffused housing, multiply lumen values by 0.8.

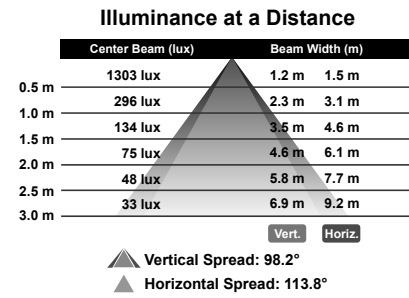
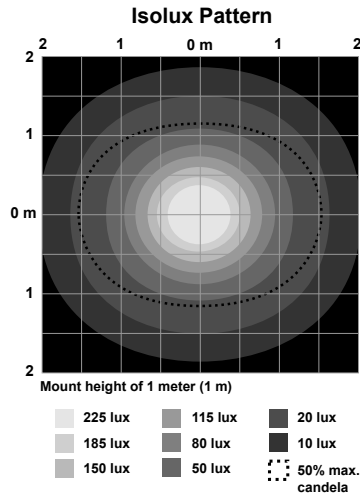
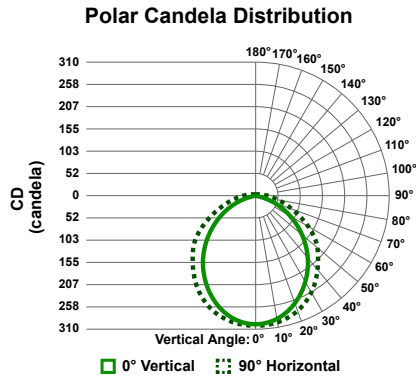
145 mm Models



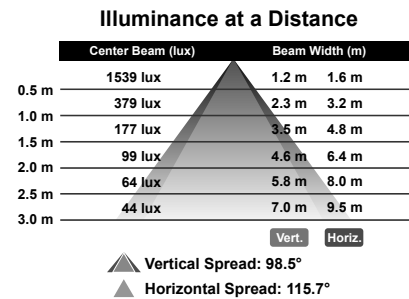
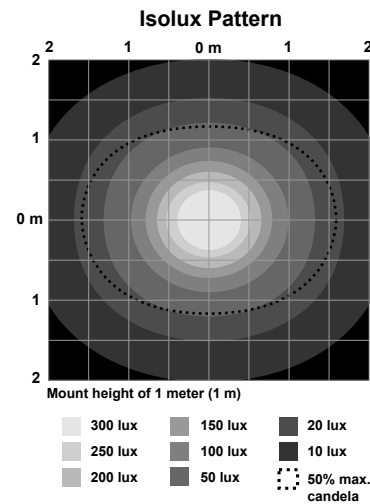
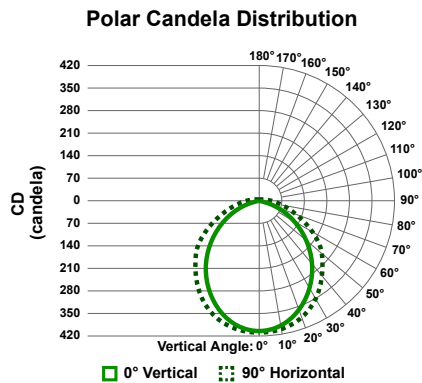
285 mm Models



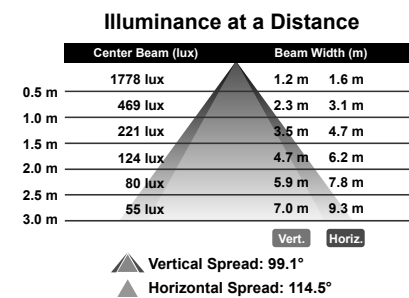
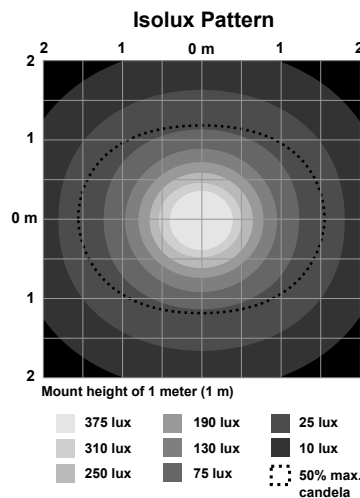
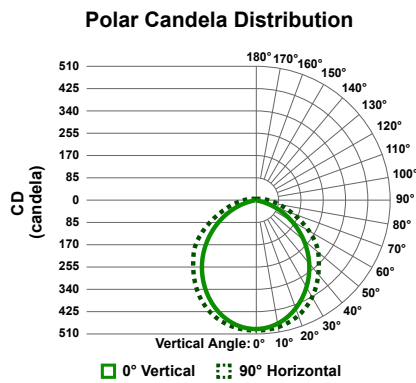
430 mm Models



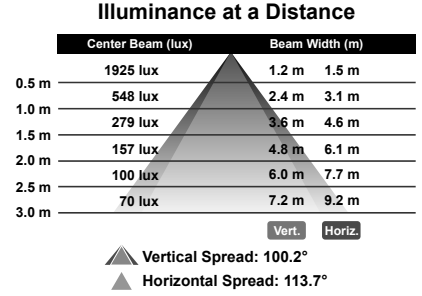
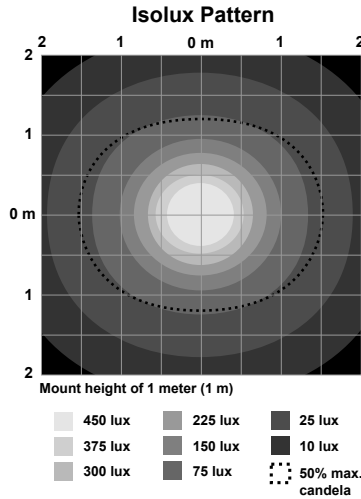
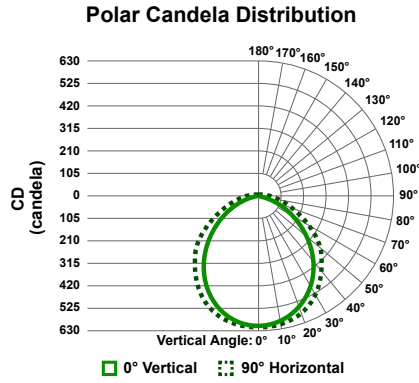
570 mm Models



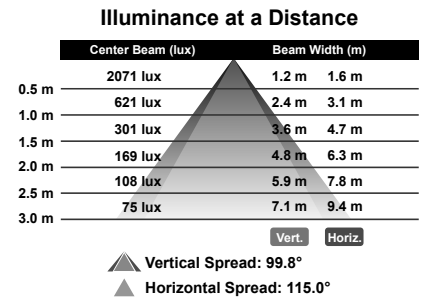
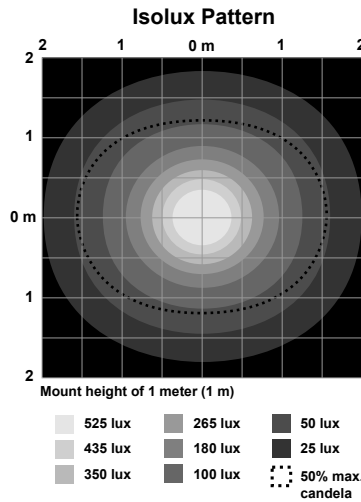
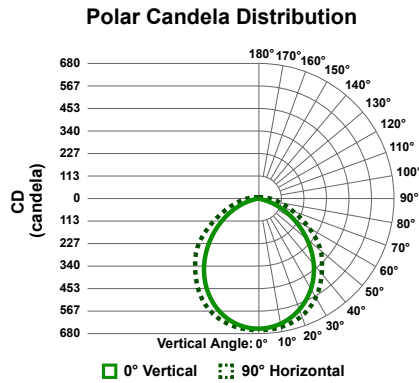
710 mm Models



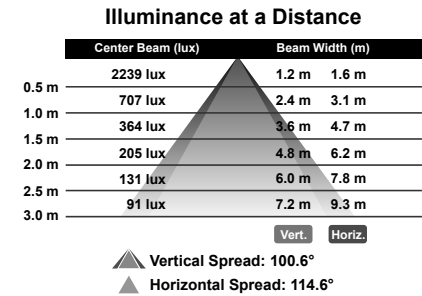
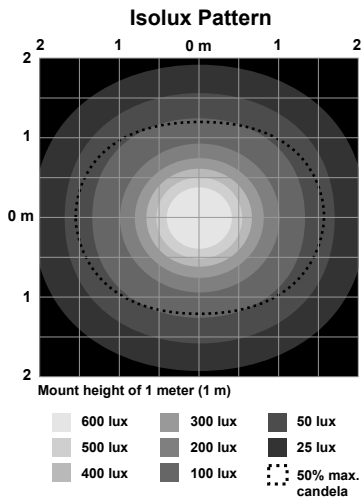
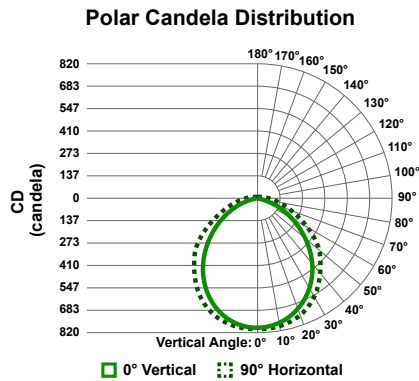
850 mm Models



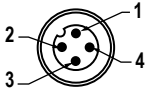
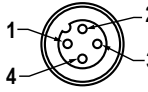
990 mm Models



1130 mm Models

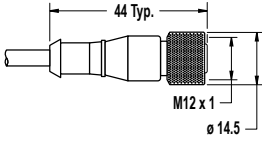
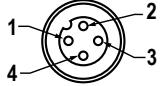
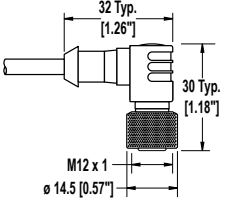


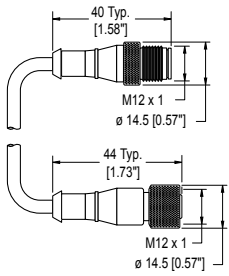
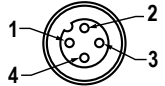
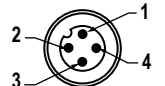
Wiring Diagram

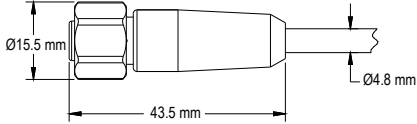
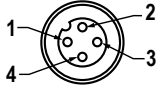
| Male | Female | Pin | Wire Color | Connection |
|---|---|-----|------------|--|
|  |  | 1 | brown | 12 to 30 V dc |
| | | 3 | blue | dc common |
| | | 4 | black | Pulse width modulation (PWM) input. For maximum intensity, leave the black wire floating or connected to common. |
| | | 2 | white | Not used |

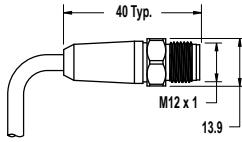
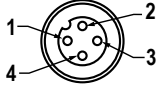
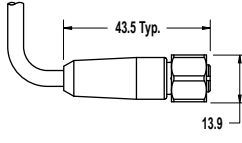

Accessories

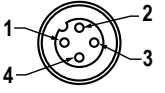
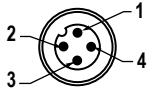
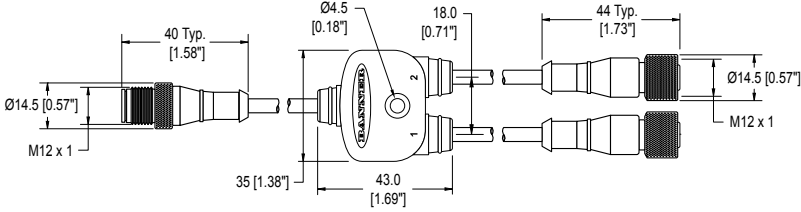
Cordsets

| 4-Pin Threaded M12/Euro-Style Cordsets—Single Ended | | | | |
|---|----------------|-------------|---|---|
| Model | Length | Style | Dimensions | Pinout (Female) |
| MQDC-406 | 1.83 m (6 ft) | Straight |  |  <p>1 = Brown 2 = White 3 = Blue 4 = Black</p> |
| MQDC-415 | 4.57 m (15 ft) | | | |
| MQDC-430 | 9.14 m (30 ft) | | | |
| MQDC-450 | 15.2 m (50 ft) | | | |
| MQDC-406RA | 1.83 m (6 ft) | Right-Angle |  | |
| MQDC-415RA | 4.57 m (15 ft) | | | |
| MQDC-430RA | 9.14 m (30 ft) | | | |
| MQDC-450RA | 15.2 m (50 ft) | | | |

| 4-Pin Threaded M12/Euro-Style Cordsets—Double Ended | | | | |
|---|----------------|-----------------------------------|--|---|
| Model | Length | Style | Dimensions | Pinout |
| MQDEC-401SS | 0.31 m (1 ft) | Male Straight/ Female Straight |  | Female |
| MQDEC-403SS | 0.91 m (3 ft) | | |  |
| MQDEC-406SS | 1.83 m (6 ft) | | |  |
| MQDEC-412SS | 3.66 m (12 ft) | | | <p>1 = Brown 2 = White 3 = Blue 4 = Black</p> |
| MQDEC-420SS | 6.10 m (20 ft) | | | |
| MQDEC-430SS | 9.14 m (30 ft) | | | |
| MQDEC-450SS | 15.2 m (50 ft) | | | |

| 4-Pin Threaded M12/Euro-Style Cordsets—Washdown, Stainless Steel, Single Ended | | | | |
|--|----------------|----------|--|---|
| Model | Length | Style | Dimensions | Pinout (Female) |
| MQDC-WDSS-0406 | 1.83 m (6 ft) | Straight |  |  <p>1 = Brown 2 = White 3 = Blue 4 = Black</p> |
| MQDC-WDSS-0415 | 4.57 m (15 ft) | | | |
| MQDC-WDSS-0430 | 9.14 m (30 ft) | | | |

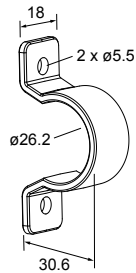
| 4-Pin Threaded M12/Euro-Style Cordsets—Double Ended, Washdown, Stainless Steel | | | | |
|--|----------------|-----------------------------------|---|---|
| Model | Length | Style | Dimensions | Pinout |
| MQDEC-WDSS-401SS | 0.3 m (1 ft) | Male Straight/ Female Straight |  | Female |
| MQDEC-WDSS-403SS | 0.91 m (3 ft) | | |  |
| MQDEC-WDSS-406SS | 1.83 m (6 ft) | | | Male |
| MQDEC-WDSS-412SS | 3.66 m (12 ft) | |  |  <p>1 = Brown 2 = White 3 = Blue 4 = Black</p> |

| 4-Pin Threaded M12/Euro-Style Splitter Cordsets—Flat Junction | | | |
|--|-------------------|-----------------------------|---|
| Model | Branches (Female) | Trunk (Male) | Pinout |
| CSB-M1240M1240 | No branch | No trunk |  <p>Female</p>  <p>Male</p> <p>1 = Brown 2 = White 3 = Blue 4 = Black</p> |
| CSB-M1240M1241 | 2 x 0.30 m (1 ft) | No trunk | |
| CSB-M1241M1241 | | 0.30 m (1 ft) | |
| CSB-M1248M1241 | | 2.50 m (8 ft) | |
| CSB-M12415M1241 | | 4.57 m (15 ft) | |
| CSB-M12425M1241 | | 7.60 m (25 ft) | |
| CSB-UNT425M1241 | | 7.60 m (25 ft) unterminated | |
|  | | | |

Brackets

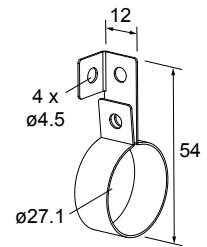
LMBWLS27EC

- Clear copolyester
- Clearance for M5 or #10 hardware



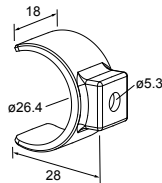
LMBWLS27H

- 300 series stainless steel mounting brackets
- M4 stainless steel hardware included



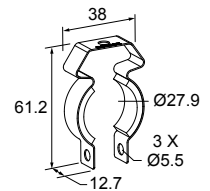
LMBWLS27SP

- Clear copolyester
- Clearance for M5 or #10 hardware
- Snap bracket for light duty applications



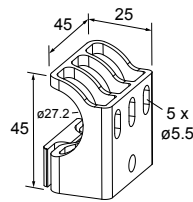
LMBWLS27T

- Stainless steel mounting brackets with rubber grips
- M5 stainless steel hardware included
- Clearance for M5 or #10 hardware



LMBWLS27U

- Clear copolyester
- Clearance for M5 or #10 hardware
- Clamps securely around the light body



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