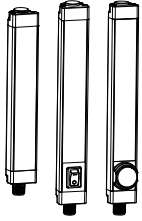


# WLS28-2 Dual Color LED Strip Light



## Datasheet

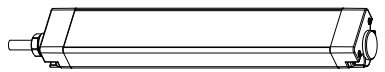


Banner's LED Strip Lights have sturdy aluminum housings, shatterproof windows, and impressive environmental ratings, making them an ideal general-purpose LED light for machine, enclosure, or other industrial lighting applications. Having two colors in one device make these ideal for mobile vehicle, machine status, and vision lighting applications.

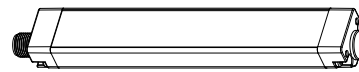
- Low-profile, space-saving design
- Rugged, water-resistant IP69K option
- Available in eight lengths from 145 to 1130 mm
- Lensed models or choice of clear or diffuse window
- Daisy chain power to multiple lights
- Optional snap clips for easy installation and repositioning
- Optional switch for color selection and control
- Automatic temperature protection built into the unit. Above 50 °C, the light dims to manage heat and protect product lifetime



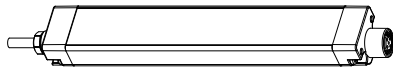
**NOTE:** When cascading lights, a model with a color selection switch can be used to control the lights cascaded off the switched model.



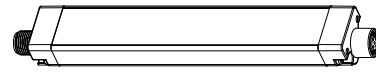
Stand-Alone Light—cable



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



First Light in a Cascade—cable

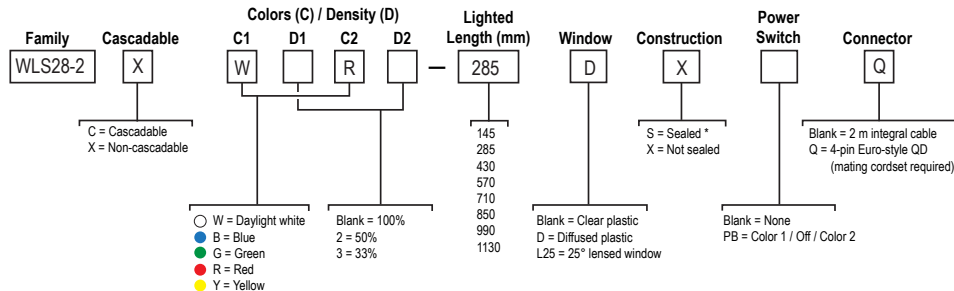


First or Middle of a Cascade—QD

WLS28-2 LED Strip Lights 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 cable or male QD fitting at one end for power connection, no connections at opposite end. A stand-alone model may be used as the last in the cascade series.

Cascade models have cable or male QD fitting at one end for power connection, female QD fitting at opposite end for connection to other lights in the cascade. Cascade models with cable end can only be used as the first light in the cascade series. A double-ended accessory cordset must be used between each pair of lights in a cascade.



Density (D) is defined by the quantity of LEDs populated on the circuit. For example, at 100% density, there are 18 LEDs per 285 mm, and at 50% density, there are 9 LEDs per 285 mm. The lumen output decreases proportionally with density.

Sample Model Number	Description
WLS28-2XWR-570XQ	Non Cascade, White (100% Density), Red (100% Density), 570 mm, Unsealed, 4-pin M12/Euro-style quick disconnect connector



Sample Model Number	Description
WLS28-2XWR-285SQ	Non Cascade, White (100% Density), Red (100% Density), 285 mm, Sealed, 4-pin M12/Euro-style quick disconnect connector
WLS28-2CWR-850XQ	Cascadable, White (100% Density), Red (100% Density), 850 mm, Unsealed, 4-pin M12/Euro-style quick disconnect connector
WLS28-2XWR2-1130X	Non Cascade, White (100% Density), Red (50% Density), 1130 mm, Unsealed, 2 m integral cable with flying leads
WLS28-2XWR2-285XPBQ	Non-Cascade, White (100% Density), Red (50% Density), 285 mm, Unsealed, Color 1 /OFF / Color 2 rocker switch, 4-pin M12/Euro-style quick disconnect connector

## Specifications

### Operating Voltage

12 to 30 V dc

Use only with suitable Class 2 power supply (UL) or a SELV power supply (CE).

Light Length (mm)	Typical Current (A)			Max. Current (A)
	12 V dc	24 V dc	30 V dc	
145	0.33	0.15	0.12	0.4
285	0.66	0.30	0.24	0.8
430	1.01	0.46	0.36	1.2
570	1.36	0.61	0.48	1.6
710	1.75	0.77	0.60	2.0
850	2.13	0.92	0.73	2.4
990	2.59	1.08	0.85	2.8
1130	3.04	1.24	0.97	3.2

### Light Characteristics - Daylight White

Color Temperature (CCT): 4700–5300K

Lumen output: 475 (± 5%) per 285 mm, typical at 25 °C (77 °F)

CRI: 83, typical

### Light Characteristics - Other Colors

Color	Typical Wavelength or Color Temperature	Typical Intensity (per 285 mm) <sup>1</sup>
Red	625 nm	200
Yellow	590 nm	150
Green	525 nm	300
Blue	470 nm	110



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

### Push Button

II = Color 2

I = Color 1

0 = Off

### Connections

Integral 4-pin M12 male quick disconnect (QD) (4-pin connecting cordset required); or 2 m (6.5 ft) integral cable

### Mounting

(2) swivel brackets SMBWLS28RA included and (4) screws

### Construction

Clear anodized aluminum housing; painted zinc end caps; polycarbonate window; zinc plated steel brackets

### Environmental Rating

IEC IP50 (non-sealed models) or IEC IP67/IP69K per DIN 40050 (sealed models)

### 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

### 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)

### Storage Temperature

–40 °C to +70 °C (–40 °F to +158 °F)

### Certifications



### Application Notes

When connecting cascadable lights in series it is important not to exceed maximum current limitations:

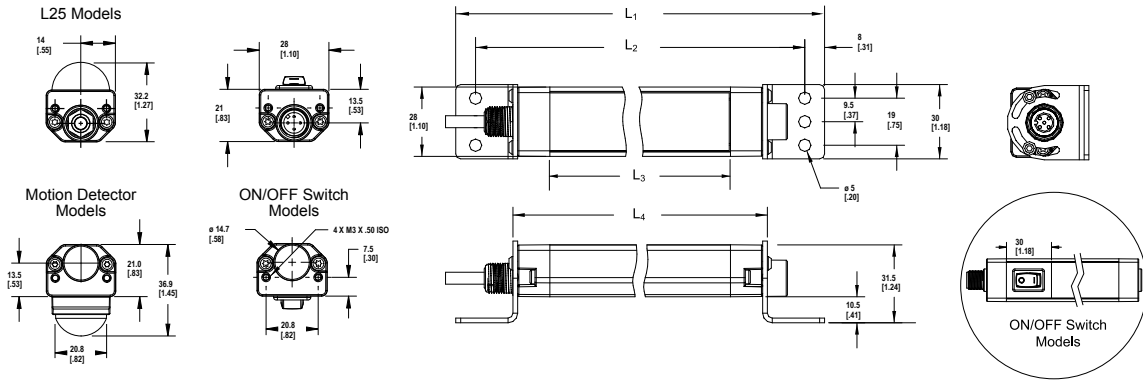
Maximum length of light at 12 V dc: 1.4 m (4.6 ft)

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)

<sup>1</sup> Lumen values are reduced by 25% on diffused window models.

## Dimensions



Dimensions are shown with the included SMBWLS28RA bracket.

Non-Switch Models					
IP50 Models	IP67/IP69K Models	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>
WLS28-2..145X	WLS28-2..145S	221 mm (8.7 in)	205 mm (8.1 in)	145 mm (5.71 in)	175 mm (6.9 in)
WLS28-2..285X	WLS28-2..285S	362 mm (14.3 in)	346 mm (13.6 in)	286 mm (11.26 in)	316 mm (12.4 in)
WLS28-2..430X	WLS28-2..430S	503 mm (19.8 in)	487 mm (19.2 in)	427 mm (16.81 in)	457 mm (18.0 in)
WLS28-2..570X	WLS28-2..570S	644 mm (25.4 in)	628 mm (24.7 in)	568 mm (22.36 in)	598 mm (23.5 in)
WLS28-2..710X	WLS28-2..710S	785 mm (30.9 in)	769 mm (30.3 in)	709 mm (27.91 in)	739 mm (29.1 in)
WLS28-2..850X	WLS28-2..850S	926 mm (36.5 in)	910 mm (35.8 in)	850 mm (33.46 in)	880 mm (34.6 in)
WLS28-2..990X	WLS28-2..990S	1067 mm (42 in)	1051 mm (41.4 in)	991 mm (39.02 in)	1021 mm (40.2 in)
WLS28-2..1130X	WLS28-2..1130S	1208 mm (47.6 in)	1192 mm (46.9 in)	1132 mm (44.57 in)	1162 mm (45.7 in)

ON/OFF Switch Models				
Model	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>
WLS28-2..145XPB	251 mm (9.9 in)	235 mm (9.3 in)	145 mm (5.71 in)	205 mm (8.1 in)
WLS28-2..285XPB	392 mm (15.4 in)	376 mm (14.8 in)	286 mm (11.26 in)	346 mm (13.6 in)
WLS28-2..430XPB	533 mm (21.0 in)	517 mm (20.4 in)	427 mm (16.81 in)	487 mm (19.2 in)
WLS28-2..570XPB	674 mm (26.5 in)	658 mm (25.9 in)	568 mm (22.36 in)	628 mm (24.7 in)
WLS28-2..710XPB	815 mm (32.1 in)	799 mm (31.5 in)	709 mm (27.91 in)	769 mm (30.3 in)
WLS28-2..850XPB	956 mm (37.6 in)	940 mm (37 in)	850 mm (33.46 in)	910 mm (35.8 in)
WLS28-2..990XPB	1097 mm (43.2 in)	1081 mm (42.6 in)	991 mm (39.02 in)	1051 mm (41.4 in)
WLS28-2..1130XPB	1238 mm (48.7 in)	1222 mm (48.1 in)	1132 mm (44.57 in)	1192 mm (46.9 in)

## Wiring Diagram

Male	Female	Pin	Wire Color	Connection
		1	brown	Color 1: 12 to 30 V dc
		3	blue	dc common
		4	black	Color 2: 12 to 30 V dc (color 2 overrides color 1)
		2	white	Not used

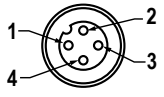
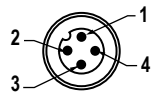
## Accessories

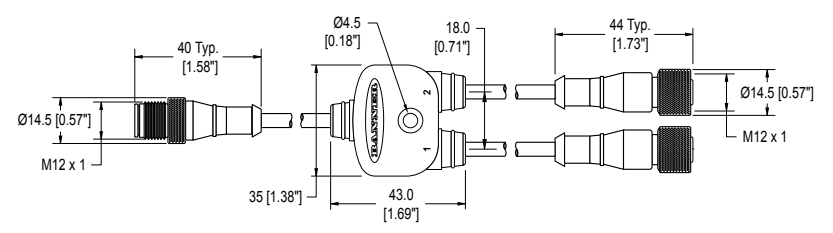
### Cordsets

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.

4-Pin Threaded M12/Euro-Style Cordsets				
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)			

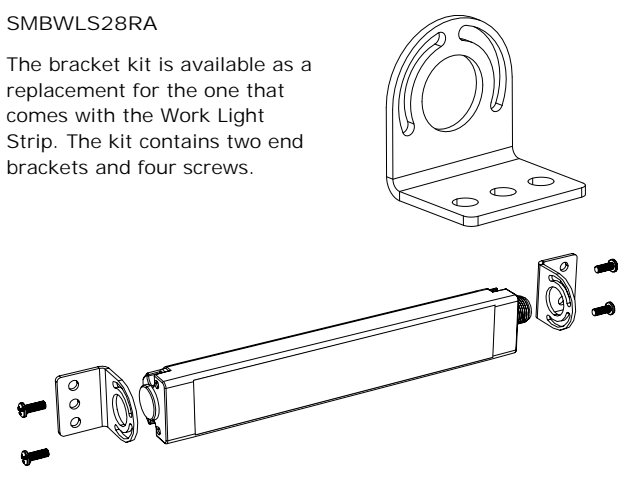

4-Pin Threaded M12/Euro-Style Cordsets—Double Ended				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight/ Female Straight		Female
MQDEC-403SS	0.91 m (3 ft)			
MQDEC-406SS	1.83 m (6 ft)			Male
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30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

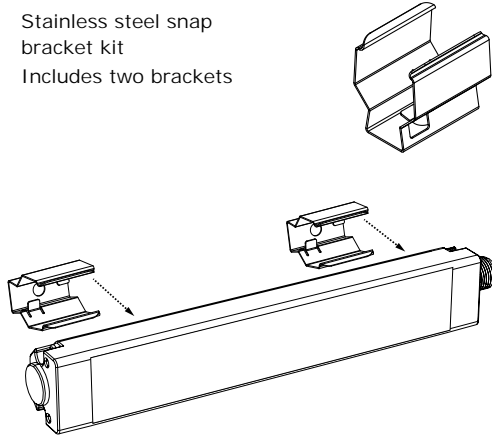
Technical drawing dimensions:  
 - Trunk length: 40 Typ. [1.58"]  
 - Branch length: 44 Typ. [1.73"]  
 - Trunk diameter: Ø14.5 [0.57"]  
 - Branch diameter: Ø4.5 [0.18"]  
 - Trunk thread: M12 x 1  
 - Branch thread: M12 x 1  
 - Total length: 43.0 [1.69"]  
 - Branch offset: 18.0 [0.71"]  
 - Branch offset: 35 [1.38"]

Brackets

<p><b>SMBWLS28RA</b></p> <p>The bracket kit is available as a replacement for the one that comes with the Work Light Strip. The kit contains two end brackets and four screws.</p> 	<p><b>SMBWLS28SM</b></p> <p>This kit allows the light to be mounted at a right angle to the mounting surface. The kit contains two end brackets and four screws.</p> 
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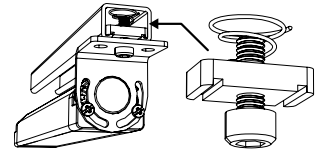
**SMBWLS28SP**

- Stainless steel snap bracket kit
- Includes two brackets

**SMH1316**

This kit allows the light to be mounted to a 13/16-inch Unistrut channel. The kit includes:

- #10-32 spring nuts (qty 2)
- #10-32 socket head cap screws (qty 2)
- #10 lock washers (qty 2)

**SMBWLSMAG**

Magnetic mounting bracket for easy attachment to steel surfaces

**SMBWLSMAGR**

Protective cover also available to prevent scratches to painted surfaces



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