WLS28-2 Dual Color LED Strip Light

BANNER®
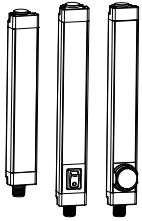*more sensors, more solutions*

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 4 lengths from 285 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
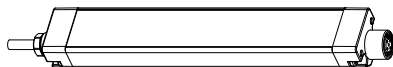
> NOTE: When cascading lights, a model with a color selection switch can be used to control the lights cascaded off the switched model.
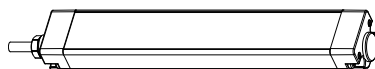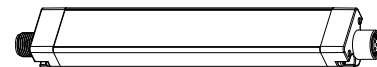
Stand-Alone Light—cable
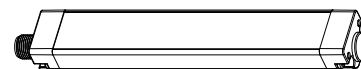
Stand-Alone Light or End Light in a Cascade—QD

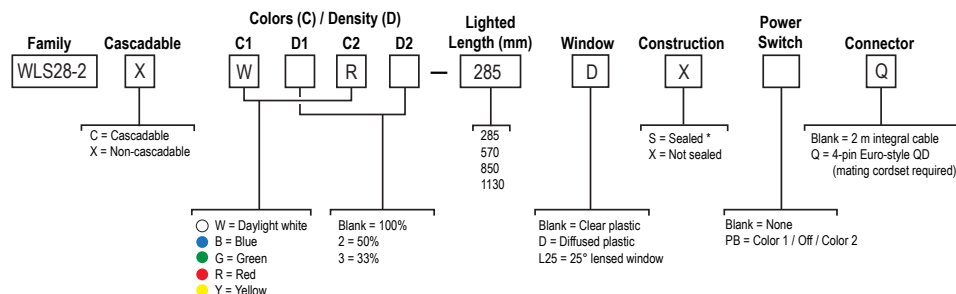First Light in a Cascade—cable

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.

Family	Cascadable	Colors (C) / Density (D)				Lighted Length (mm)	Window	Construction	Power Switch	Connector
		C1	D1	C2	D2					
WLS28-2	X	W		R		— 285	D	X		Q

Cascadable
C = Cascadable
X = Non-cascadable

Lighted Length (mm)
285
570
850
1130

Construction
S = Sealed *
X = Not sealed

Connector
Blank = 2 m integral cable
Q = 4-pin Euro-style QD (mating cordset required)

Colors (C)
○ W = Daylight white
● B = Blue
● G = Green
● R = Red
● Y = Yellow

Density (D)
Blank = 100%
2 = 50%
3 = 33%

Window
Blank = Clear plastic
D = Diffused plastic
L25 = 25° lensed window

Power Switch
Blank = None
PB = Color 1 / Off / Color 2

* Sealed models not available with On/Off Switch

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
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	Typical Current			Max. Current
	12 V dc	24 V dc	30 V dc	A
285 mm	0.66 A	0.30 A	0.24 A	0.8
570 mm	1.36 A	0.61 A	0.48 A	1.6
850 mm	2.13 A	0.92 A	0.73 A	2.4
1130 mm	3.04 A	1.24 A	0.97 A	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) [1]
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 quick disconnect fitting (4-pin connecting cordset required for QD models); 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
    −25 °C to +70 °C (−13 °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

$C\epsilon$ c(UL)us LISTED

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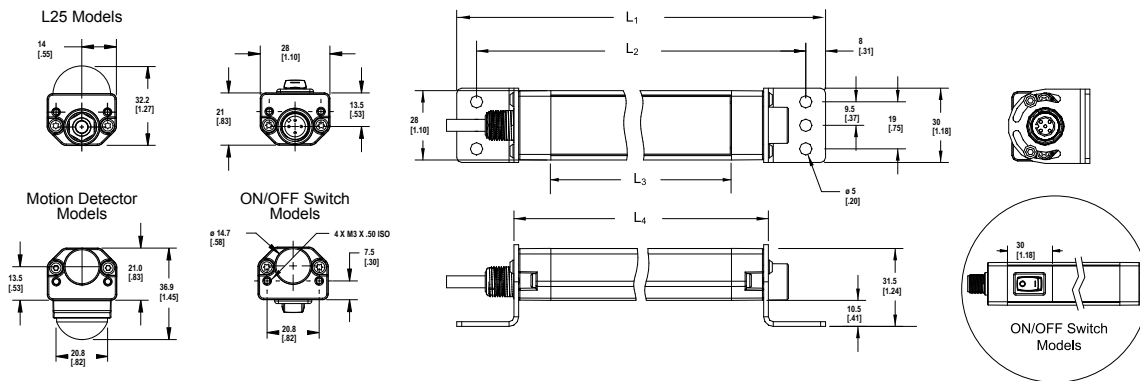
        Maximum length of light at 12 V dc: 1.4 m (4.6 ft)
        Maximum length of light at 24 V dc: 3.0 m (9.8 ft)
        Maximum length of light at 30 V dc: 3.1 m (10.2 ft)

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[1]   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$_1$	L$_2$	L$_3$	L$_4$
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..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..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..1130X	WLS28-2..1130S	1208 mm (47.6 in)	1192 mm (46.9 in)	1132 mm (44.57 in)	1162 mm (45.7 in)

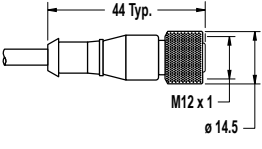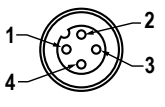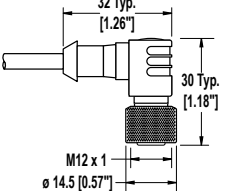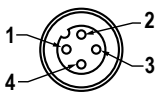| ON/OFF Switch Models				
Model	L$_1$	L$_2$	L$_3$	L$_4$
WLS28-2..285XPB	392 mm (15.4 in)	376 mm (14.8 in)	286 mm (11.26 in)	346 mm (13.6 in)
WLS28-2..570XPB	674 mm (26.5 in)	658 mm (25.9 in)	568 mm (22.36 in)	628 mm (24.7 in)
WLS28-2..850XPB	956 mm (37.6 in)	940 mm (37 in)	850 mm (33.46 in)	910 mm (35.8 in)
WLS28-2..1130XPB	1238 mm (48.7 in)	1222 mm (48.1 in)	1132 mm (44.57 in)	1192 mm (46.9 in)

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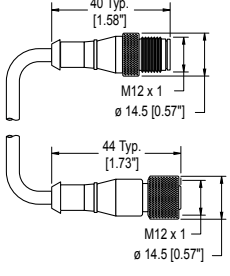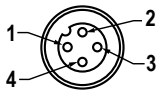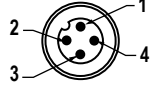
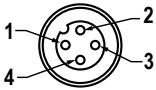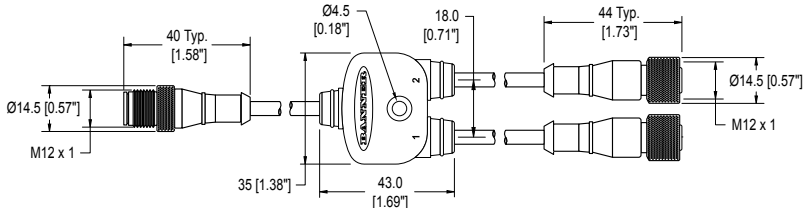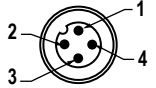| Male	Female	Pin	Wire Color	Connection
		1	brown	Color 1: 12 to 30 V dc
		3	blue	dc common
		4	black	Color 2: 12 to 30 V dc (color 2 overrides color 1)
		2	white	Not used

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.
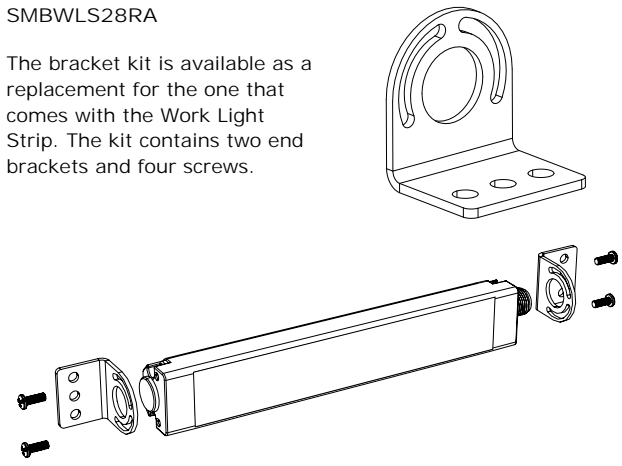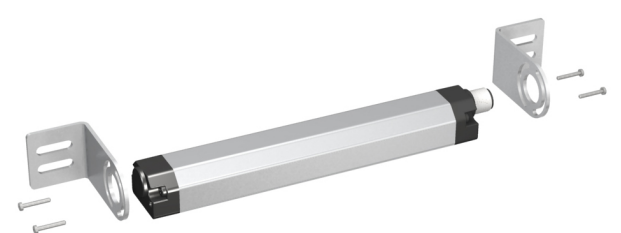
4-Pin Threaded M12/Euro-Style Cordsets

Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	1.83 m (6 ft)	Straight		
MQDC-415	4.57 m (15 ft)			
MQDC-430	9.14 m (30 ft)		44 Typ. M12 x 1 ø 14.5	
MQDC-450	15.2 m (50 ft)			1 = Brown
MQDC-406RA	1.83 m (6 ft)	Right-Angle		2 = White
MQDC-415RA	4.57 m (15 ft)		32 Typ. [1.26"] 30 Typ. [1.18"] M12 x 1 ø 14.5 [0.57"]	3 = Blue
MQDC-430RA	9.14 m (30 ft)			4 = Black
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)		40 Typ. [1.58"] M12 x 1 ø 14.5 [0.57"]	
MQDEC-412SS	3.66 m (12 ft)			Male
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30 ft)		44 Typ. [1.73"] M12 x 1 ø 14.5 [0.57"]	1 = Brown
MQDEC-450SS	15.2 m (50 ft)			2 = White
				3 = Blue
				4 = Black

4-Pin Threaded M12/Euro-Style Splitter Cordsets — Flat Junction			
Model	Branches (Female)	Trunk (Male)	Pinout
CSB-M1240M1240	No branch	No trunk	Female
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	

1 = Brown
2 = White
3 = Blue
4 = Black

Brackets

SMBWLS28RA

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.

SMBWLS28SM

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.
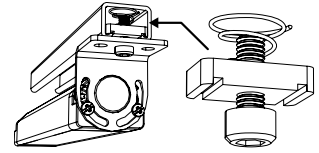
SMBWLS28SP

- Stainless steel snap bracket kit
- Includes two brackets
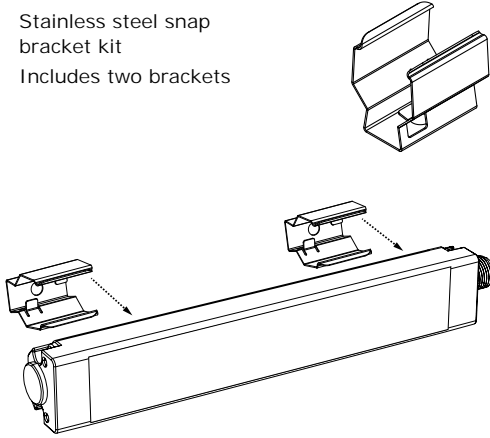
SMH1316

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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