WLS28-2 Dual Color LED Strip Light

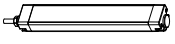
Features



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 mm 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 lifetime

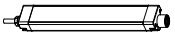
NOTE: When cascading lights, a model with a color selection switch can be used to control the lights cascaded off the switched model.



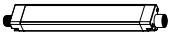
Stand-Alone Light—cable



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.

IMPORTANT: Read the following instructions before operating the light. Please download the complete WLS28-2 Dual Color LED Strip Light technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

IMPORTANT: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los WLS28-2 Dual Color LED Strip Light, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

IMPORTANT: Lisez les instructions suivantes avant d'utiliser le luminaire. Veuillez télécharger la documentation technique complète des WLS28-2 Dual Color LED Strip Light sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

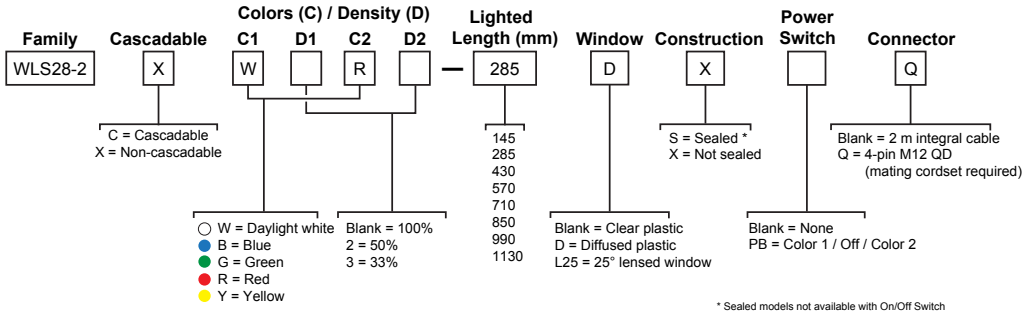
Original Instructions
15-Sep-25

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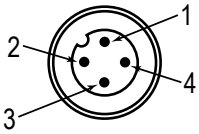
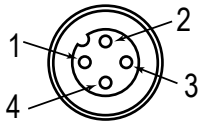
Models



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 quick disconnect connector
WLS28-2XWR-285SQ	Non-Cascade, White (100% Density), Red (100% Density), 285 mm, Sealed, 4-pin M12 quick disconnect connector
WLS28-2CWR-850XQ	Cascadable, White (100% Density), Red (100% Density), 850 mm, Unsealed, 4-pin M12 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 quick disconnect connector

Wiring

Male	Female	Pin	Wire Color	Connection
		1	Brown	Color 1: 12 V DC to 30 V DC
		3	Blue	DC common
		4	Black	Color 2: 12 V DC to 30 V DC (Color 2 overrides Color 1)
		2	White	Not used

Specifications

Operating Voltage

12 V DC to 30 V DC

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

See electrical characteristics on product label

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	0.3	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	0.6	2
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) [1]
Red	625 nm	200
Yellow	590 nm	150
Green	525 nm	300
Blue	470 nm	110

Push Button

II = Color 2

I = Color 1

0 = Off

Connections

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

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

Mounting

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

Construction

Clear anodized aluminum housing; painted zinc end caps; polycarbonate window on clear and diffuse plastic models; acrylic window on L25 models; zinc plated steel brackets

[1] Lumen values are reduced by 25% on diffused window models.

Environmental Rating

IP50 (non-sealed models) or IP65, IP67, IP69K per ISO 20653 (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

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Sealed models only

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Application Notes

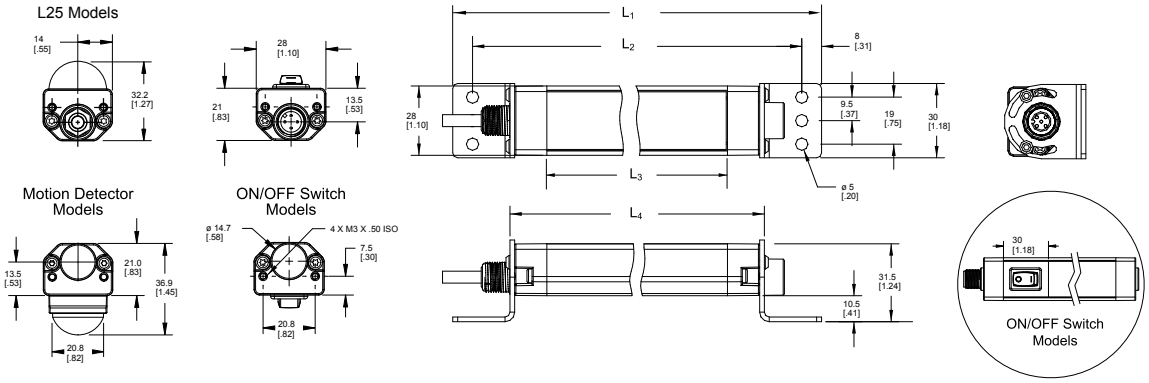
When connecting cascadable lights in series it is important not to exceed maximum current limitations:

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)

Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise. The measurements provided are subject to change.



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..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_1	L_2	L_3	L_4
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)

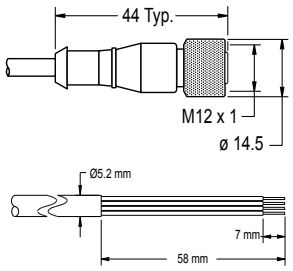
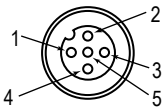
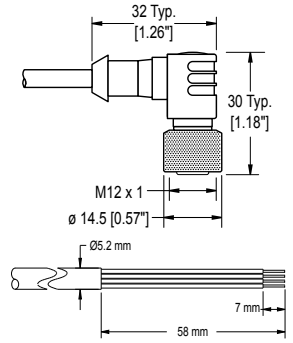
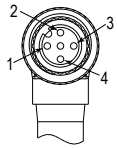
Accessories

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.

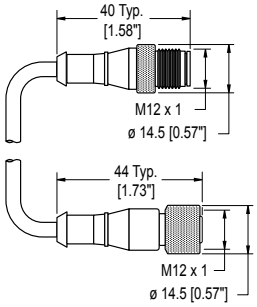
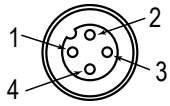
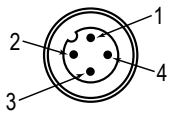
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4-Pin Single-Ended M12 Female Cordsets

Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	2 m (6.56 ft)	Straight		
MQDC-415	5 m (16.4 ft)			
MQDC-430	9 m (29.5 ft)			
MQDC-450	15 m (49.2 ft)			
MQDC-406RA	2 m (6.56 ft)	Right-Angle		
MQDC-415RA	5 m (16.4 ft)			
MQDC-430RA	9 m (29.5 ft)			
MQDC-450RA	15 m (49.2 ft)			

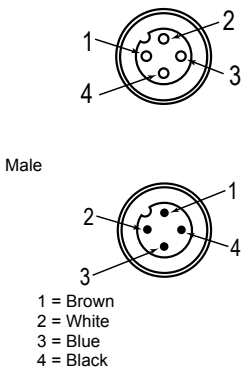
1 = Brown
2 = White
3 = Blue
4 = Black
5 = Not used

4-Pin Double-Ended M12 Female to M12 Male Cordsets

Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight/Female Straight		 
MQDEC-403SS	0.91 m (2.99 ft)			
MQDEC-406SS	1.83 m (6 ft)			
MQDEC-412SS	3.66 m (12 ft)			
MQDEC-415SS	4.58 m (15 ft)			
MQDEC-420SS	6.10 m (20 ft)			
MQDEC-430SS	9.14 m (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			

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

4-Pin Flat Junction M12 Female Branch to M12 MaleTrunk Splitter Cordsets

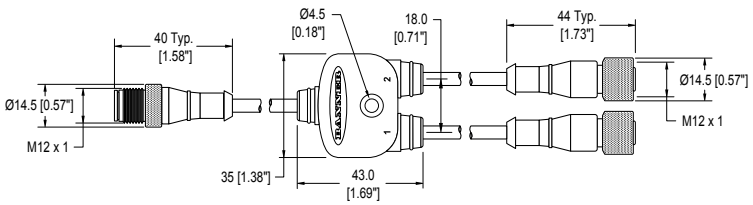
Model	Branches (Female)	Trunk (Male)	Pinout
CSB-M1240M1240	No branch	No trunk	
CSB-M1240M1241	2 × 0.3 m (1 ft)	No trunk	
CSB-M1241M1241		0.31 m (1 ft)	
CSB-M1248M1241		2.44 m (8 ft)	
CSB-M12415M1241		4.57 m (15 ft)	
CSB-M12425M1241		7.60 m (25 ft)	
CSB-UNT425M1241		7.60 m (25 ft) Unterminated	
CSB-M1243M1243	2 × 1 m (3.28 ft)	1 m (3.28 ft)	

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

Continued on page 5

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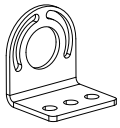
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4-Pin Flat Junction M12 Female Branch to M12 MaleTrunk Splitter Cordsets			
Model	**Branches (Female)**	**Trunk (Male)**	**Pinout**
			

Brackets

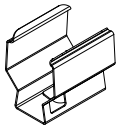
SMBWLS28RA

- Replacement end bracket kit
- 1.8 mm (14 gage) cold rolled steel with zinc plate, clear chromate finish
- Kit contains two end brackets and four screws



SMBWLS28SP

- Stainless steel snap bracket kit
- Includes two brackets

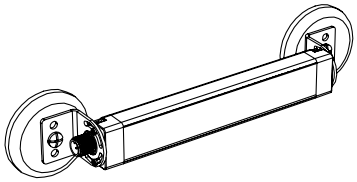


SMBWLSMAG

- Magnetic mounting bracket for easy attachment to steel surfaces

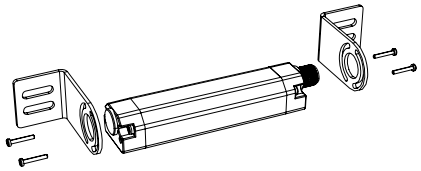
SMBWLSMAGR

- Protective cover also available to prevent scratches to painted surfaces



SMBWLS28SM

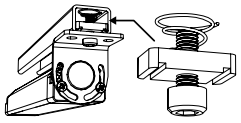
- End bracket kit
- Cold Rolled Steel with a clear zinc finish
- Allows the light or switch to be mounted at a right angle to the mounting surface
- Kit contains two end brackets and four screws



SMH1316

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

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



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