

Instruction Manual

Banner's WLS27 Multicolor 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.

- EZ-STATUS combines lighting and indication in one device to illuminate an area or machine, and show status change
- Models with 3 or 5 colors available, all with only 3 inputs
- Rugged, water-resistant IEC IP69K rating
- Four available lengths from 285 mm to 1130 mm
- Daisy chain power to multiple lights



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



First or Middle of a Cascade—QD

Available as stand-alone models, or as cascade models that can be daisy-chained together for a continuous length of lighting, with a minimum of wiring.

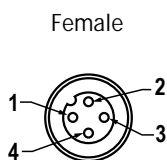
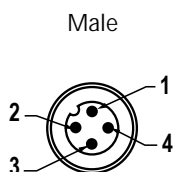
Stand-alone models have a male quick disconnect (QD) at one end for power connection and no connections at the opposite end. A stand-alone model may be used as the last model in the cascade series.

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.

Models

Family	Cascadable	Colors 1-5 and Control	Lighted Length (mm)	Window	Construction	Voltage	Connector
WLS27	X	WGRXX3	0285	D	S	24	Q
	C = Cascadable X = Non-cascadable	WGRXX3 = White, Green, and Red with override control WYRXX3 = White, Yellow, and Red with override control GYRXX3 = Green, Yellow, and Red with override control WGRYB5 = White, Green, Red, Yellow, and Blue with binary control WGRXX6 = White, Green, and Red with I/O Block control WYRXX6 = White, Yellow, and Red with I/O Block control GYRXX6 = Green, Yellow, and Red with I/O Block control	0285 0570 0850 1130	D = Diffused	S = Sealed	24 = 24V dc	Q = Integral 4-pin M12 QD (mating cordset required)

Wiring Diagrams



- Key
- Pin 1 Brown Input 1
 - Pin 2 White: Input 3
 - Pin 3 Blue: DC Common
 - Pin 4 Black: Input 2



3 Color Override Control (<i>Color 3 overrides Colors 1 and 2, Color 2 overrides Color 1</i>)				5 Color Binary Control (<i>Binary input state controls color</i>)			
Input 1: Pin 1 Brown Wire	Input 2: Pin 4 Black Wire	Input 3: Pin 2 White Wire	LED Color	Input 1: Pin 1 Brown Wire	Input 2: Pin 4 Black Wire	Input 3: Pin 2 White Wire	LED Color
—	—	—	Light Off	—	—	—	Light Off
+24 V dc	—	—	Color 1 On	+24 V dc	—	—	Color 1 On
—	+24 V dc	—	Color 2 On	—	+24 V dc	—	Color 2 On
+24 V dc	+24 V dc	—	Color 2 On	—	—	+24 V dc	Color 3 On
—	—	+24 V dc	Color 3 On	+24 V dc	+24 V dc	—	Color 4 On
+24 V dc	—	+24 V dc	Color 3 On	+24 V dc	—	+24 V dc	Color 5 On
—	+24 V dc	+24 V dc	Color 3 On	—	+24 V dc	+24 V dc	Light Off
+24 V dc	+24 V dc	+24 V dc	Color 3 On	+24 V dc	+24 V dc	+24 V dc	Light Off

3 Color I/O Block Control (<i>Input 1 is always on through the block</i>)			
Input 1: Pin 1 Brown Wire	Input 2: Pin 4 Black Wire	Input 3: Pin 2 White Wire	LED Color
+24 V dc	—	—	Light Off
+24 V dc	+24 V dc	—	Color 1 On
+24 V dc	—	+24 V dc	Color 2 On
+24 V dc	+24 V dc	+24 V dc	Color 3 On

Specifications

Supply Voltage

24 V dc (+ 20% / - 10%)

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

Lighted Length	Typical Current (A) at 25° C ¹	Maximum Current (A)
285 mm	0.315	0.400
570 mm	0.630	0.800
850 mm	0.945	1.200
1130 mm	1.260	1.600

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Light Characteristics

Daylight White Efficacy: 85 lumens/watt typical at 24 V dc at 25 °C (77 °F)

CRI: 80, minimum

Color	Dominant Wavelength (nm) or Color Temperature	Lighted Length Lumens (Typical at 25 °C) ¹			
		285 mm	570 mm	850 mm	1130 mm
Daylight White	5000 K (±300 K)	650	1300	1950	2600
Green	525 nm	400	800	1200	1600
Red	625 nm	185	370	555	740
Yellow	580 nm	570	1140	1710	2280
Blue	470 nm	125	250	375	500

Application Notes

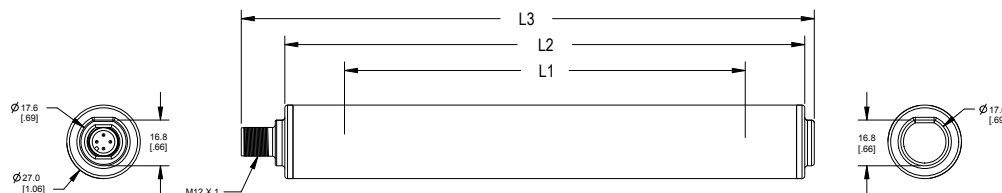
When connecting cascadable lights in series it is important not to exceed maximum current limitations:

Maximum length of light at 24 V dc: 3.0 m (9.8 ft)

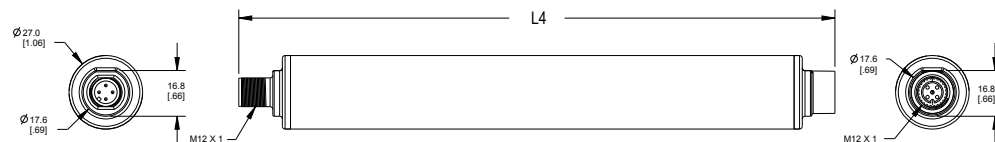
Do not spray cable with high-pressure sprayer, or cable damage will result.

Dimensions

Quick Disconnect Models



Cascade Models



Models	L1	L2	L3	L4
WLS27..0285..	286 mm (11.3 in)	330 (13 in)	349.5 mm (13.8 in)	358 mm (14.1 in)

¹ Values shown at 25 °C - current and lumen values decrease 0.4% per 1 °C from ambient. For example, a 1130 mm unit will have a maximum current of 1.600 A at -40 °C and 1.134 A at +50 °C.

Leakage Current Immunity

400 µA

LED Lifetime

Lumen Maintenance - L₇₀

When operating within specifications, output decreases less than 30% after 50,000 hours

Mounting

Bracket LMBWLS27EC included (2 for lights up to 570 mm or 3 for lights 850 mm and longer)

Construction

Clear anodized aluminum inner housing and FDA-grade copolyester outer housing

Connections

Integral 4-pin M12/Euro-style male quick disconnect (QD)

Environmental Rating

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

Vibration and Mechanical Shock

Vibration 10 Hz to 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 +50 °C (-40 °F to +122 °F)

Storage Temperature: -40 °C to +70 °C (-40 °F to +158 °F)

Certifications



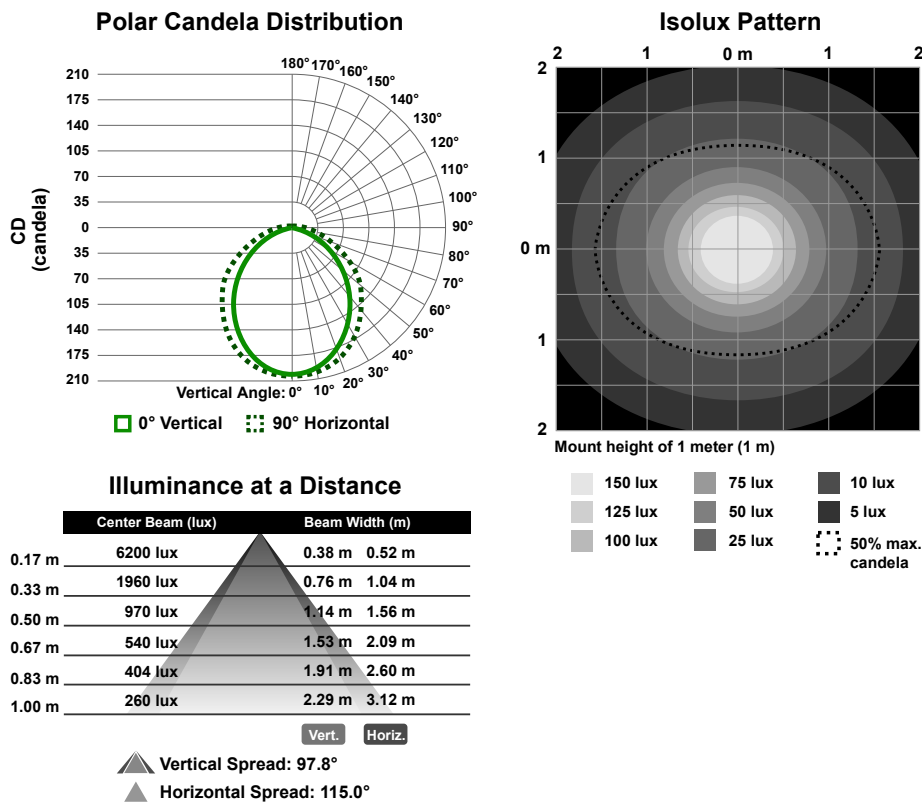
Models	L1	L2	L3	L4
WLS27..0570..	569 mm (22.4 in)	612 mm (24.1 in)	631.5 mm (24.9 in)	640 mm (25.2 in)
WLS27..0850..	849 mm (33.4 in)	893 mm (35.2 in)	912.5 mm (35.9 in)	921 mm (36.2 in)
WLS27..1130..	1120 mm (44.1 in)	1164 mm (45.8 in)	1183.5 mm (46.4 in)	1192 mm (46.9 in)

Performance Curves

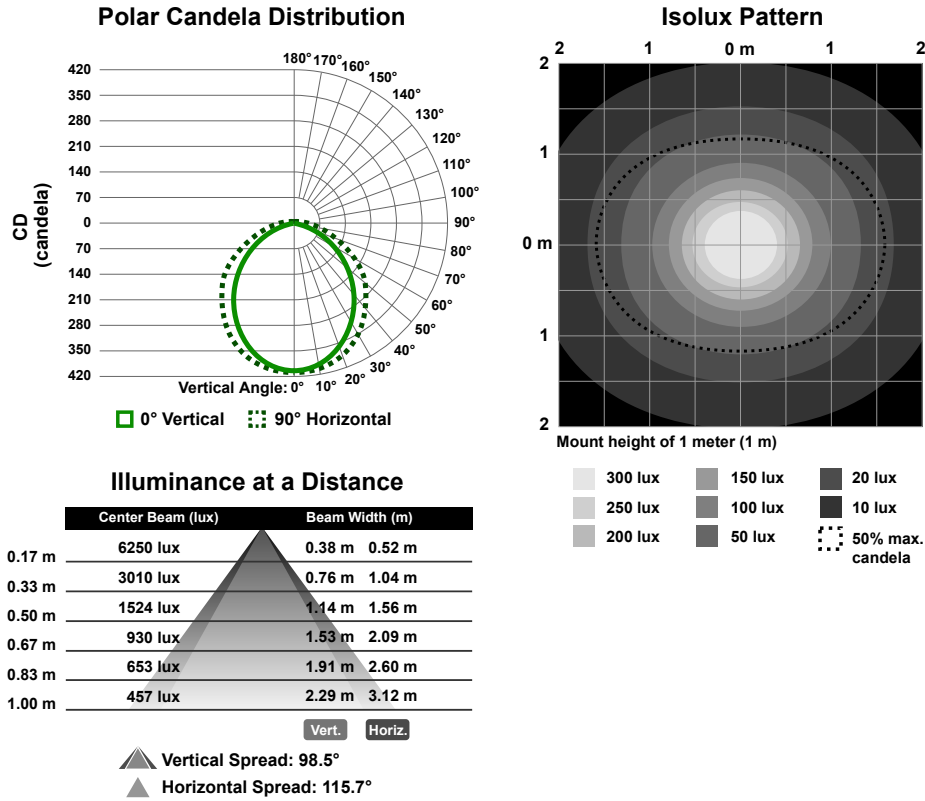
Optical data shown below is for daylight white only. To get lux and candela values for green, red, yellow, and blue, multiply the values shown on the charts by the following factors:

- Green: 0.615
- Red: 0.285
- Yellow: 0.875
- Blue: 0.195

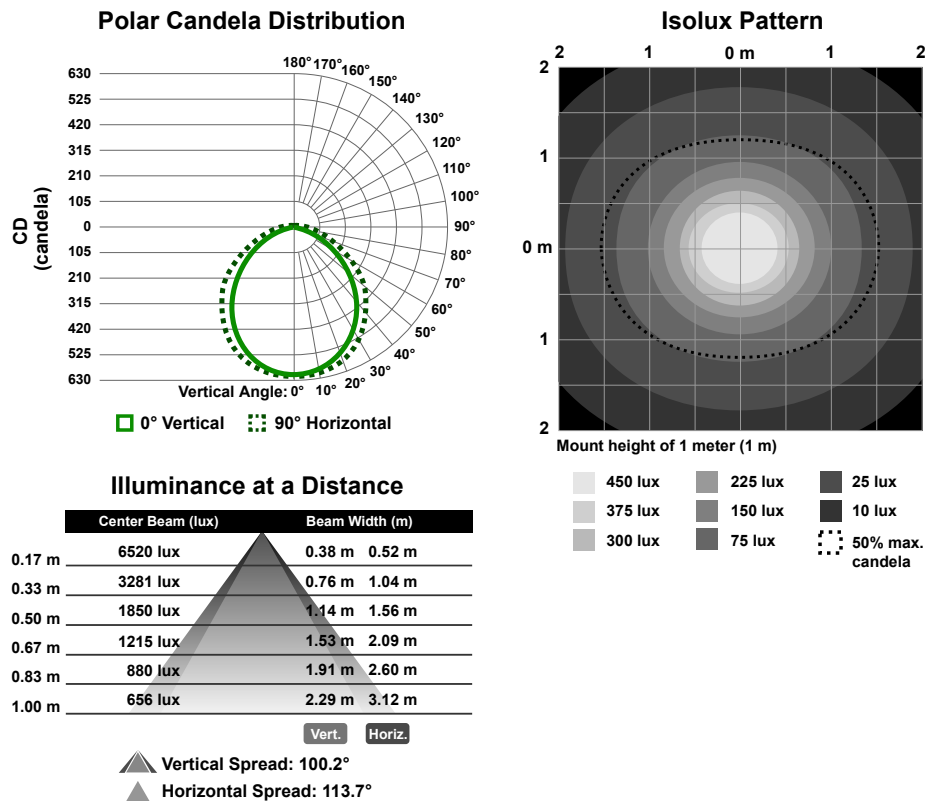
285 mm Models



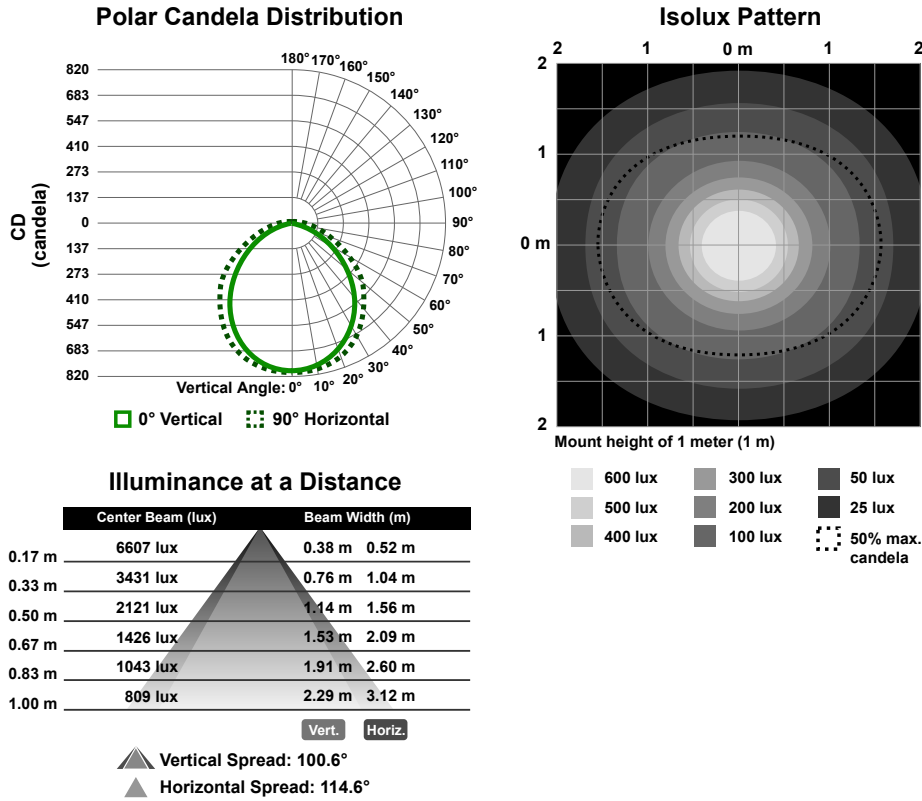
570 mm Models



850 mm Models



1130 mm Models



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)			
MQDC-450	15.2 m (50 ft)			
MQDC-406RA	1.83 m (6 ft)	Right-Angle		1 = Brown 2 = White 3 = Blue 4 = Black
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)			<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
MQDEC-430SS	9.14 m (30 ft)			
MQDEC-450SS	15.2 m (50 ft)			

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

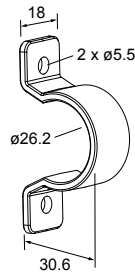
4-Pin Threaded M12/Euro-Style Cordsets—Double Ended, Washdown, Stainless Steel				
Model	Length	Style	Dimensions	Pinout
MQDEC-WDSS-401SS	0.3 m (1 ft)	Male Straight/ Female Straight		Female
MQDEC-WDSS-403SS	0.91 m (3 ft)			
MQDEC-WDSS-406SS	1.83 m (6 ft)			Male
MQDEC-WDSS-412SS	3.66 m (12 ft)			<p>1 =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

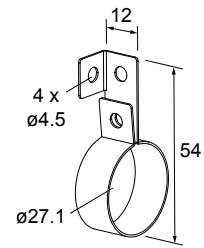
LMBWLS27EC

- Clear copolyester
- Clearance for M5 or #10 hardware



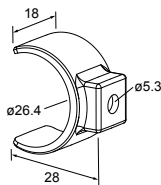
LMBWLS27H

- Stainless steel mounting brackets
- M4 stainless steel hardware included



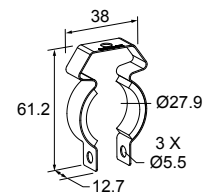
LMBWLS27SP

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



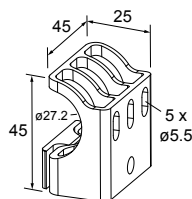
LMBWLS27T

- 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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