

# WLS27 Multicolor LED Strip Light with EZ-STATUS™



## 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 DIN IP69K rating
- Four available lengths from 285 mm to 1130 mm
- Daisy chain power to multiple lights
- Heavy diffused housing option provides uniform light for indication purposes



Stand-Alone Light or End Light in a Cascade



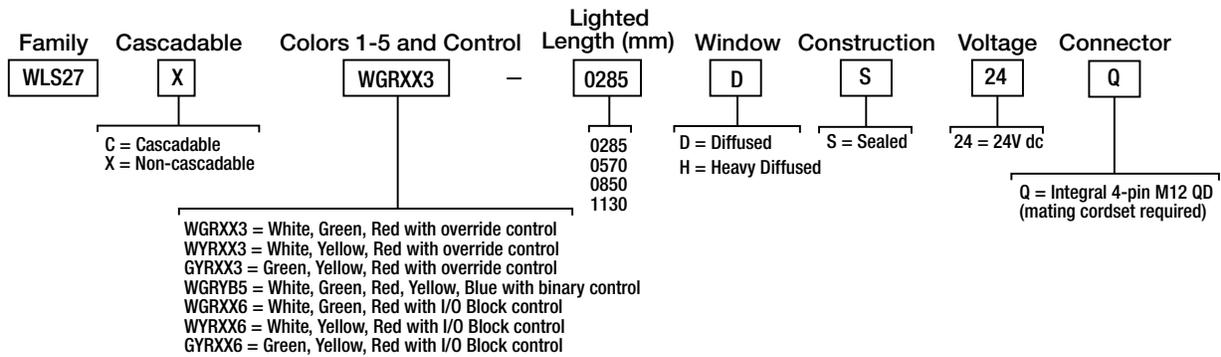
First or Middle of a Cascade

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 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 at one end for power connection, and a female quick disconnect 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



## Wiring Diagrams

Male	Female	Pin	Wire Color	Description
		1	Brown	Input 1
		2	White	Input 3
		3	Blue	dc common
		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 <sup>1</sup>	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) <sup>1</sup>			
		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 cascaded 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.

### Leakage Current Immunity

400 µA

### LED Lifetime

Lumen Maintenance - L<sub>70</sub>

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 quick disconnect

### Environmental Rating

Rated IEC IP66, IEC IP67, and DIN IP69K

### Vibration and Mechanical Shock

Vibration: 10 Hz to 55 Hz, 1.0 mm peak-to-peak 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)

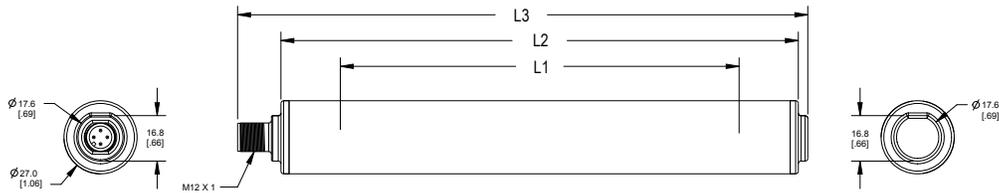
### Certifications



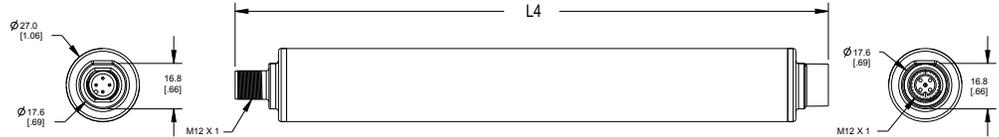
<sup>1</sup> Values shown at 25 °C - current and lumen values decrease 0.4% per 1 °C from ambient. For example, a 1130 mm unit will have a maximum current of 1.600 A at -40 °C and 1.134 A at +50 °C.

## 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)
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)

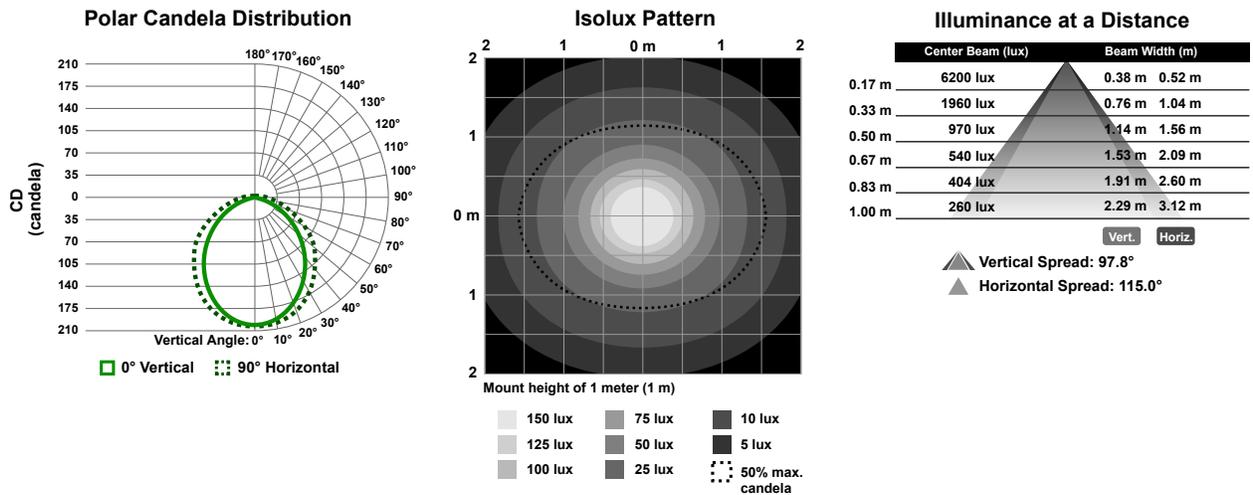
## Performance Curves

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

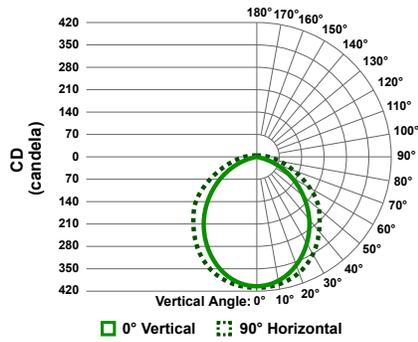
For models with heavy diffused housing, multiply lumen values by 0.8.

## 285 mm Models

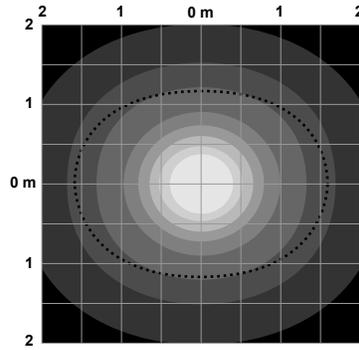


### 570 mm Models

**Polar Candela Distribution**



**Isolux Pattern**



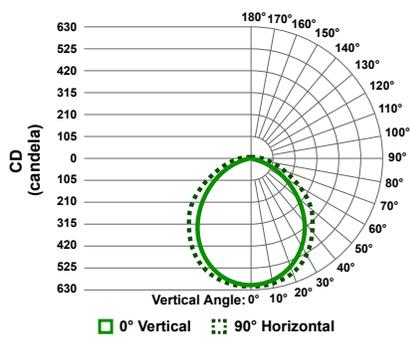
**Illuminance at a Distance**

	Center Beam (lux)	Beam Width (m)	
0.17 m	6250 lux	0.38 m	0.52 m
0.33 m	3010 lux	0.76 m	1.04 m
0.50 m	1524 lux	1.14 m	1.56 m
0.67 m	930 lux	1.53 m	2.09 m
0.83 m	653 lux	1.91 m	2.60 m
1.00 m	457 lux	2.29 m	3.12 m

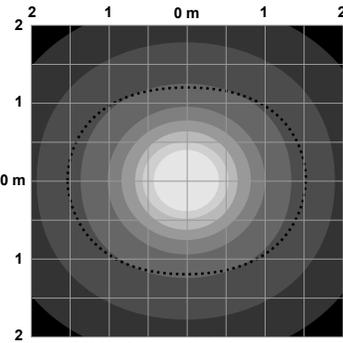
Vertical Spread: 98.5°  
 Horizontal Spread: 115.7°

### 850 mm Models

**Polar Candela Distribution**



**Isolux Pattern**



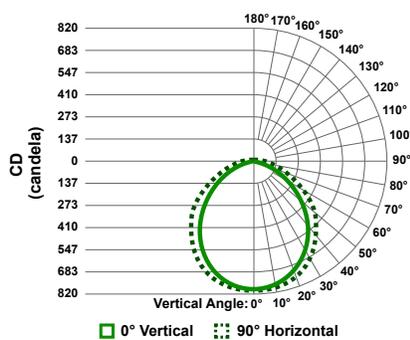
**Illuminance at a Distance**

	Center Beam (lux)	Beam Width (m)	
0.17 m	6520 lux	0.38 m	0.52 m
0.33 m	3281 lux	0.76 m	1.04 m
0.50 m	1850 lux	1.14 m	1.56 m
0.67 m	1215 lux	1.53 m	2.09 m
0.83 m	880 lux	1.91 m	2.60 m
1.00 m	656 lux	2.29 m	3.12 m

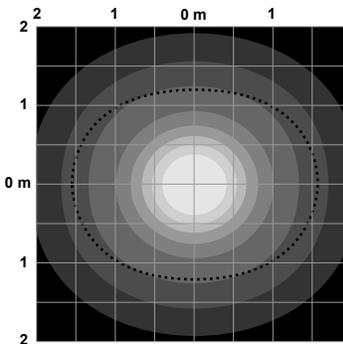
Vertical Spread: 100.2°  
 Horizontal Spread: 113.7°

### 1130 mm Models

**Polar Candela Distribution**



**Isolux Pattern**



**Illuminance at a Distance**

	Center Beam (lux)	Beam Width (m)	
0.17 m	6607 lux	0.38 m	0.52 m
0.33 m	3431 lux	0.76 m	1.04 m
0.50 m	2121 lux	1.14 m	1.56 m
0.67 m	1426 lux	1.53 m	2.09 m
0.83 m	1043 lux	1.91 m	2.60 m
1.00 m	809 lux	2.29 m	3.12 m

Vertical Spread: 100.6°  
 Horizontal Spread: 114.6°

## Accessories

### Cordsets

Use single-ended cordsets between the power source and the quick disconnect 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—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)			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)			

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)			

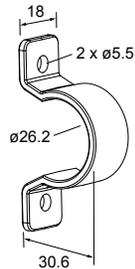
4-Pin Threaded M12/Euro-Style Cordsets—Double Ended, Washdown, Stainless Steel				
Model	Length	Style	Dimensions	Pinout
MQDEC-WDSS-401SS	0.3 m (1 ft)	Male Straight/ Female Straight		<p>Female</p> <p>Male</p> <p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
MQDEC-WDSS-403SS	0.91 m (3 ft)			
MQDEC-WDSS-406SS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

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

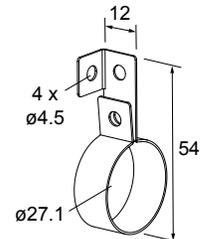
#### LMBWLS27EC

- Clear copolyester
- Clearance for M5 or #10 hardware



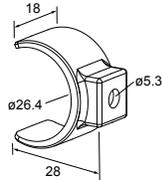
#### LMBWLS27H

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

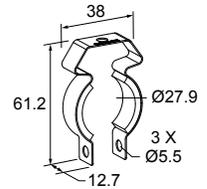


**LMBWLS27SP**

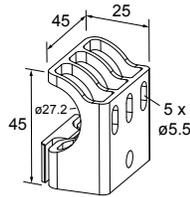
- Clear copolyester
- Clearance for M5 or #10 hardware
- Snap bracket for light duty applications

**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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