

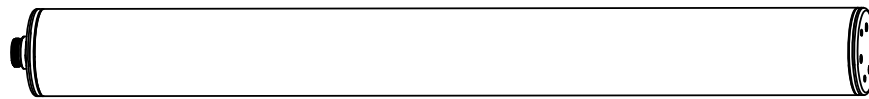
WLS70 Industrial LED Strip Light (AC)



Product Manual

Banner's WLS70 is a very bright LED luminaire that features an even light output and is designed for a wide variety of environments and applications, including but not limited to machine lighting, automation systems, industrial, wet and harsh environments, railcars, inspection, dairy/poultry production, agriculture, parking garages, and other indoor and outdoor spaces.

- Increase worker productivity and ergonomics with bright, high-quality, uniform light
- Exceptionally energy efficient for overall cost savings
- High efficacy models up to 143 lumens/watt
- Sturdy aluminum housing encased in a shatterproof, UV-stabilized, polycarbonate shell, making it ideal for harsh indoor and outdoor applications
- Rugged, waterproof and dustproof IEC IP65 rated housing for use in challenging environments
- Available in lengths 300 mm, 600 mm, 900 mm, or 1200 mm
- Daisy chain option available to power to multiple lights and control intensity simultaneously via 0 V to 10 V



These AC quick disconnect models can be used as continuous run models that can be cascaded or "daisy-chained" together for a continuous length of lighting using a double-ended accessory cordset (see [Cordsets](#) on p. 6). WLS70 models come with a standard one year warranty. To view or download the latest technical information about this product, including specifications, dimensions, accessories, and wiring, go to www.bannerengineering.com.



Important: Read the following instructions before operating the light. Please download the complete WLS70 Industrial LED Strip Light (AC) technical documentation, available in multiple languages, from www.bannerengineering.com for details on the proper use, applications, Warnings, and installation instructions of this device.

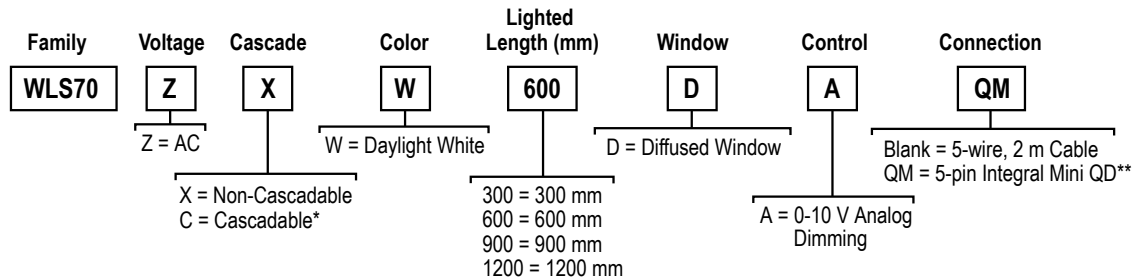


Important: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los WLS70 Industrial LED Strip Light (AC), disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.



Important: Lisez les instructions suivantes avant d'utiliser le luminario. Veuillez télécharger la documentation technique complète des WLS70 Industrial LED Strip Light (AC) sur notre site www.bannerengineering.com pour les détails sur leur utilisation correcte, les applications, les notes de sécurité et les instructions de montage.

Models



*Cascadable models only available with QM connection.

**Models with a quick disconnect require a mating cordset. See [Cordsets](#) on p. 6.



Installing the WLS70 Industrial LED Strip Light

Figure 1. Attaching the Clamp Brackets (Step 3)

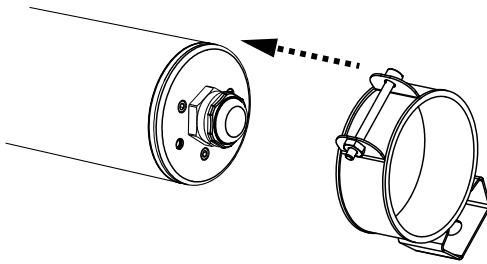
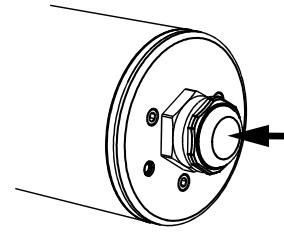


Figure 2. Verifying the Cascade Cover is Attached (Step 10)



1. Turn off power at fuse or circuit breaker box.
2. Remove the light from the packaging and inspect it for damage before installing it.
3. Attach the included LMBWLS70T clamp brackets to the light. Slide on gasket if desired.
Refer to the instruction manual for a complete list of compatible brackets.
4. Select a suitable horizontal or vertical mounting location.
5. Place the light in the mounting location and mark the positions of the bracket mounting holes.
The optional LMBWLS70HK bracket can be used to hang the light in conjunction with the LMBWLS70T (see [Brackets](#) on p. 5).
6. Drill the holes and use appropriate screws to secure the bracket to the mounting location.
7. Clamp the light onto the brackets.
8. When daisy chaining multiple lights, follow steps 1 through 5 to mount additional lights. See the application note in [Specifications](#) on p. 3 for the maximum allowed lights daisy chained together and maximum allowed cable run when choosing mounting locations.
9. Connect the daisy chained units together using cascade cordsets (see [Cordsets](#) on p. 6).
10. Verify the supplied cascade cover is on the output connector of the last light in the chain.
11. Attach cables (cabled model) or cordsets (quick-disconnect model) per the wiring diagram. Terminate wire as appropriate per application.

Installation is complete. Turn on electricity at fuse or circuit breaker box.



WARNING:

- **Risk of electric shock**
- Failure to follow these instructions could result in serious injury or death.
- Disconnect or turn off power before installing, removing, or servicing the device.
- Install and connect the device in accordance with the National Electrical Code (NEC) and any applicable local code requirements and supply the device with an appropriate fuse box or circuit breaker (see [Specifications](#)).

Wiring Diagram

Diagram	Wire	Connection	Pinout (Male)	Pinout (Female)
	L - Black	Line/Hot	<p>1 = Purple 2 = White 3 = Yellow/Green 4 = Black 5 = Gray</p>	<p>1 = Purple 2 = White 3 = Yellow/Green 4 = Black 5 = Gray</p>
	N - White	Neutral		
	- Green/Yellow	Earth ground		
	Dim (+) - Purple	0–10 V DC analog dimming		
	Dim (-) - Gray	Return analog dimming		

Specifications

Supply Voltage

Nominal voltage: 120 V AC to 277 V AC, 60 Hz in North America
 Nominal voltage: 100 V AC to 277 V AC, 50/60 Hz outside North America
 Power factor: > 0.95 at 120 V AC and > 0.90 at 277 V AC
 Total harmonic distortion (THD): < 20%
 See electrical characteristics on product label

Supply Current

Lighted Length (mm)	Max. Current Draw (A) at 100 V AC	Typical Current Draw (A)		
		120 V AC	230 V AC	277 V AC
300	0.120	0.080	0.040	0.040
600	0.220	0.165	0.080	0.070
900	0.320	0.240	0.130	0.110
1200	0.420	0.315	0.160	0.140

Application Notes

When connecting continuous run/cascadable lights in series, it is important not to exceed maximum current limitations of 8A. For example: the typical current draw of a 1200 mm fixture at 120 V is 0.315A. 8A/0.315A yields a maximum of 25 fixtures cascaded together.
 Two or more lights installed in parallel must maintain a 150 mm (6 inch) spacing to maintain a 50 °C operating temperature.

Certifications and Approvals



UL/cULus E338626

Dimming

Compatible with 0–10 V analog LED dimming, dimmable to 5% intensity
 Dimming current: < 1.0 mA

Supply Protection Circuitry

Protected against transient voltages

Construction

Clear anodized aluminum housing; polycarbonate outer housing

Mounting

Several optional mounting brackets are available (see Accessories)

Connections

Integral 5-pin 7/8/Mini-style quick disconnect (8A / 300V / 2.5kV / 2), (5-pin connecting cordset required); or 2 m (6.5 ft) integral STOOW UL/HAR PVC cable
 See [Cordsets](#) on p. 6

Environmental Rating

IEC IP65

LED Lifetime

When operating within specifications, output will decrease less than 30% after 50,000 hours.

Operating Temperature

Surface Mount Installation: –40 °C to +50 °C (–40 °F to +122 °F)
 85% at +50 °C maximum relative humidity (non-condensing)

Storage Temperature

–40 °C to +70 °C (–40 °F to +158 °F)

Vibration and Mechanical Shock

Vibration: 10 Hz to 55 Hz, 0.5 mm peak-to-peak amplitude per IEC 60068-2-6 (5 minute sweep, 30 minute dwell)
 Shock: 15G 11 ms duration, half sine wave per IEC 60068-2-27
 Impact: IK10 (IEC 60068-2-75)

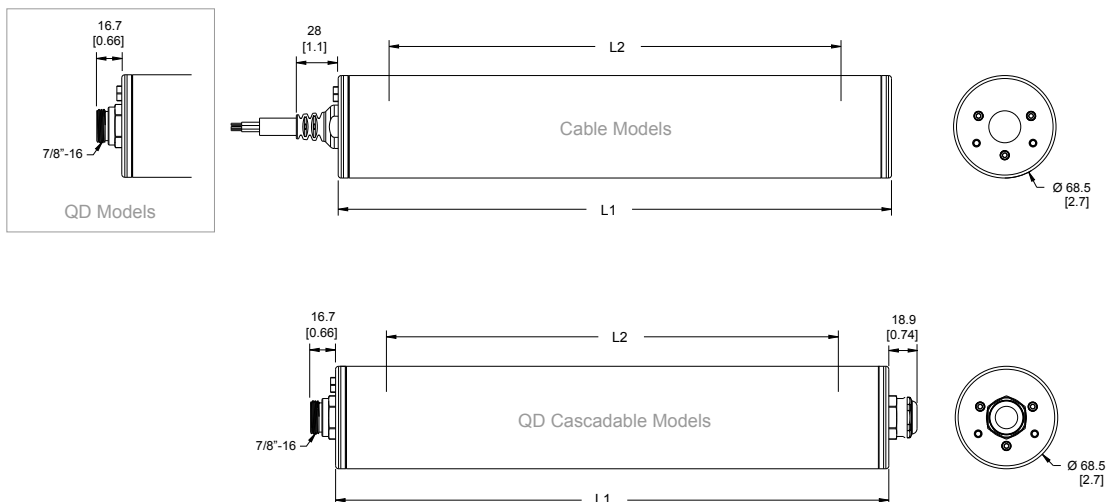
Light Characteristics

Daylight White Efficacy: up to 143 lumens/watt typical at 120 V AC at 25 °C (77 °F)
 CRI: 82, typical

Model	Color	Color Temperature (CCT)	Lumens (Typical at 25 °C)	Watts at 120 V AC	Luminous Efficacy (lm/w)
300	Daylight White	5000 K (±300 K)	1350	9.6	141
600	Daylight White	5000 K (±300 K)	2700	19.8	136
900	Daylight White	5000 K (±300 K)	4050	28.8	141
1200	Daylight White	5000 K (±300 K)	5400	37.8	143

Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise.



Model	Housing Length (L1)	Lighted Length (L2)
WLS70..300..	369.8	302
WLS70..600..	667.6	600
WLS70..900..	965.3	898
WLS70..1200..	1263	1196

Photometric Data

Figure 3. 300 mm Model

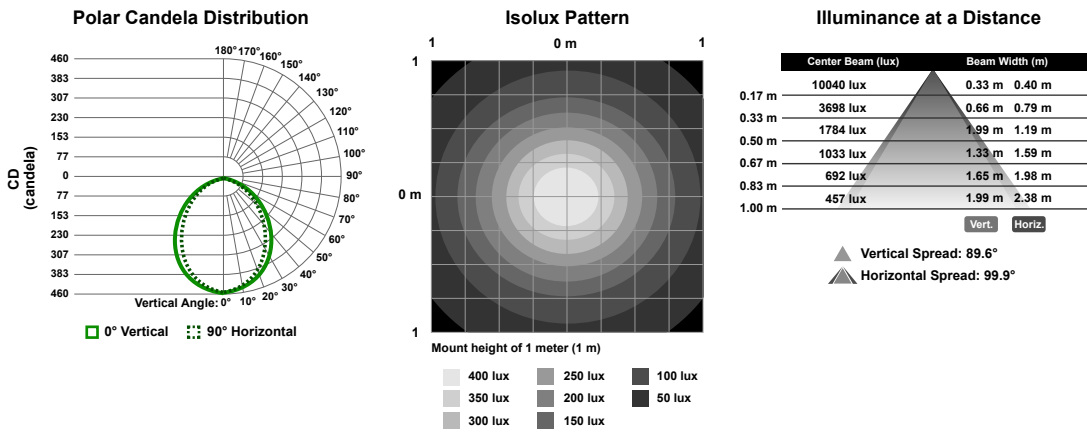


Figure 4. 600 mm Model

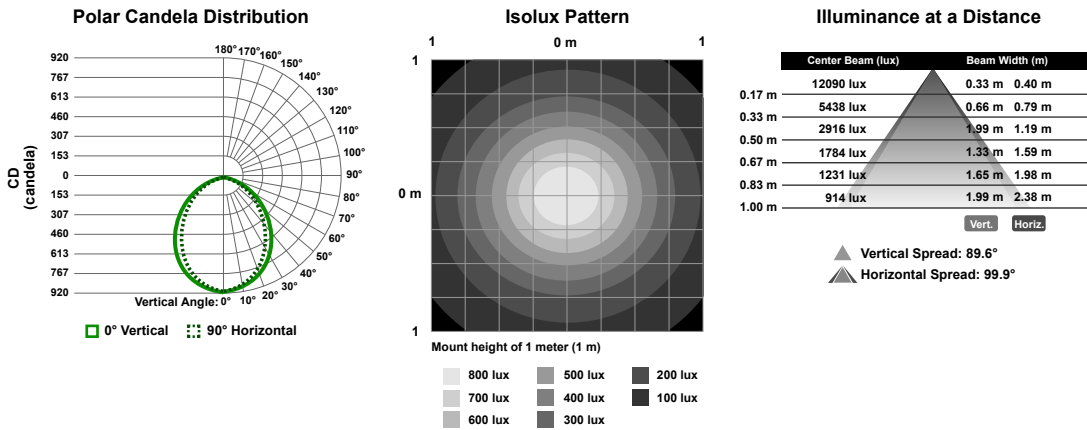


Figure 5. 900 mm Model

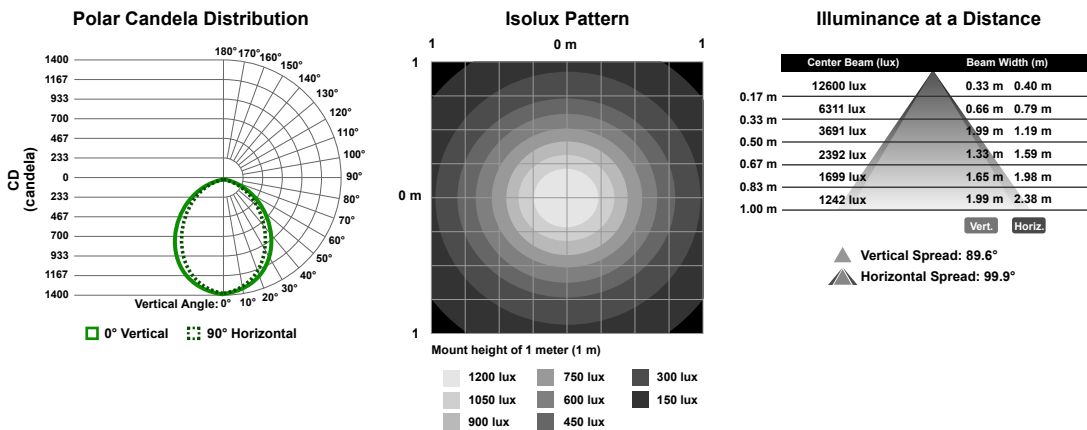
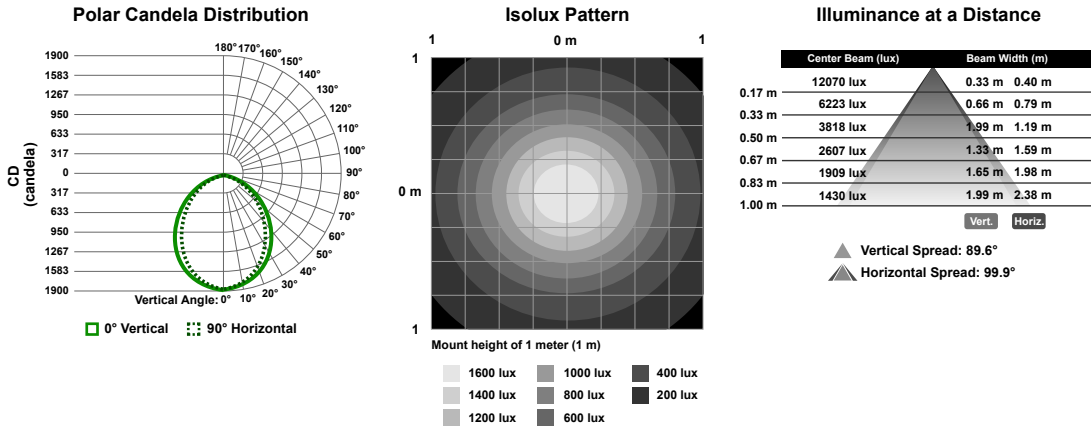


Figure 6. 1200 mm Model



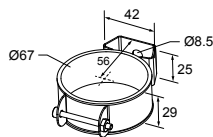
Accessories

Brackets

All measurements are listed in millimeters, unless noted otherwise.

LMBWLS70T

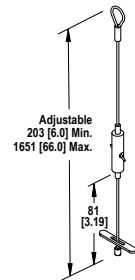
- Stainless steel
- Includes two clamp brackets for hanging or surface mount, two anti-rotation gaskets, and stainless steel hardware for securing the bracket to the light
- For use with M8 or 5/16" mounting hardware



Note: The LMBWLS70T is supplied with the light.

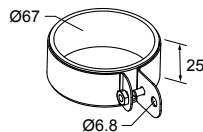
LMBWLS70HK

- Hanging bracket kit allows for suspended installation
- Includes two hanging bracket assemblies
- For use with bracket LMBWLS70T



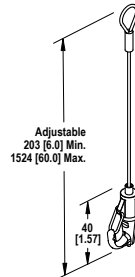
LMBWLS70H

- Stainless steel
- Includes two clamp brackets for hanging, two anti-rotation gaskets, and stainless steel hardware for securing the bracket to the light
- For use with M6 or 1/4 in mounting hardware



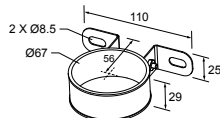
LMBWLS70HHK

- Hanging bracket kit allows for suspended installation
- Includes two hanging bracket assemblies
- For use with bracket LMBWLS70H



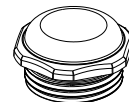
LMBWLS70

- Stainless steel
- Includes two double hole clamp brackets for surface mount, two anti-rotation gaskets, and stainless steel hardware for securing the bracket to the light
- For use with M8 or 5/16" mounting hardware

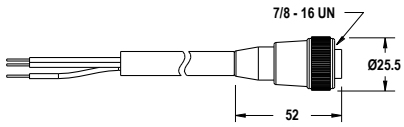
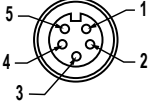


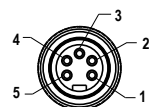
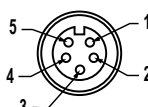
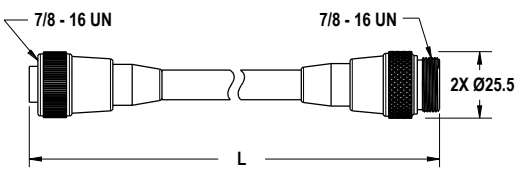
ACC-CAP-MINI-10

- 10 Caps
- Seal and protect exposed, unterminated cascade quick disconnect connectors



Cordsets

5-Pin Threaded 7/8-in Cordsets--Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MBCCL-506	2 m (6.56 ft)	Straight		 <p>1 = Purple 2 = White 3 = Yellow/Green 4 = Black 5 = Gray</p>
MBCCL-515	5 m (16.4 ft)			
MBCCL-530	9 m (29.5 ft)			

5-Pin Threaded 7/8-in Cordsets--Double Ended				
Model	Length	Style	Pinout (Male)	Pinout (Female)
MBCCL-503SS	1 m (3.28 ft)	Female Straight/Male Straight	 <p>1 = Purple 2 = White 3 = Yellow/Green 4 = Black 5 = Gray</p>	 <p>1 = Purple 2 = White 3 = Yellow/Green 4 = Black 5 = Gray</p>
MBCCL-506SS	2 m (6.56 ft)			
MBCCL-512SS	4 m (13.1 ft)			
MBCCL-520SS	6 m (19.7 ft)			
				

Banner Engineering Corp. Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

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For patent information, see www.bannerengineering.com/patents.

FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the manufacturer.

Mexican Importer

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