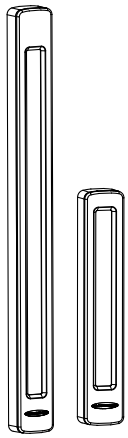
WLC60 Heavy Duty LED Light - PWM Dimmable

Datasheet



Banner's WLC60 Heavy Duty Lights are engineered to withstand harsh environments, making it the first choice for a machine lighting solution. A conservative mechanical design protects against liquid ingress and state-of-the-art LED technology delivers best of class brightness.

Choose between a durable polycarbonate window or a borosilicate glass (BSG) option featuring enhanced chemical and thermal resistance. This smart industrial lighting solution also features energy efficient eco-mode dimming states to tailor the lumen levels and power consumption to the application.

- Intensity can be controlled from 0 to 100% using Pulse Width Modulation (PWM) on an input control wire
- Rugged and durable for harsh environments
- Oil, chemical, and water resistant with IEC IP67, JIS C IP68G, and IP69K per DIN 40050-9 ratings
- High brightness paired with advanced glare-reducing optics
- Easy to install with a wide variety of mounting solutions
- Highly resistant to vibration and shock
- Input voltage of 12 to 30 V dc
- Integral 4-pin M12 Euro-style quick disconnect connector



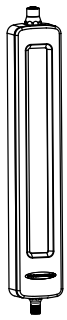
For PWM dimming, use with the LC65 Dimmer Module. For more information, refer to the LC65 LED Dimmer Module datasheet, p/n *177086*.

Important: Read the following instructions before operating the light. Please download the complete WLC60 Heavy Duty LED 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 WLC60 Heavy Duty LED Light, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

Models

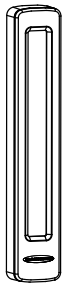
Base Mount Side Exit Connection Models



Models [1]	Cascadable	Lighted Length (mm)	Window
WLC60XW340APWMQ	No	340	Polycarbonate
WLC60XW640APWMQ		640	
WLC60CW340APWMQ	Yes	340	
WLC60CW640APWMQ		640	
WLC60XW340GAPWMQ	No	340	Borosilicate Glass
WLC60XW640GAPWMQ		640	
WLC60CW340GAPWMQ	Yes	340	
WLC60CW640GAPWMQ		640	

[1] Integral 4-pin M12/Euro-style quick disconnect models are listed.
- To order the 2 m (6.5 ft) PVC cable model, omit the suffix "Q" in the model number. For example, WLC60XW340APWM.
- Models with a quick disconnect require a mating cordset.

Base Mount Rear Exit Connection Models



Models [1]	Cascadable	Lighted Length (mm)	Window
WLC60XW340ARPWMQ	No	340	Polycarbonate
WLC60XW640ARPWMQ		640	
WLC60CW340ARPWMQ	Yes	340	
WLC60CW640ARPWMQ		640	
WLC60XW340GARPWMQ	No	340	Borosilicate Glass
WLC60XW640GARPWMQ		640	
WLC60CW340GARPWMQ	Yes	340	
WLC60CW640GARPWMQ		640	

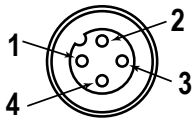
Spacing Criteria (SC)

The spacing criteria is the fixture-spacing-to-mounting-height ratio and aids in laying out a pattern of fixtures. Multiply the spacing criteria by the mounting height to get the maximum fixture spacing that still provides even illumination (no shadowing between fixtures).

Luminaire Spacing = SC × Height to Illuminated Plane

The mounting height is the distance from the fixture to the surface you are lighting.

Wiring



Pins	Color	Connection
1	brown	12 to 30 V dc
3	blue	dc common
4	black	Pulse width modulation (PWM) input
2	white	Not used

For maximum intensity, leave the white and black wires floating or connected to common.

Specifications

Supply Voltage
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

Pulse Width Modulation (PWM)
Frequency: Up to 30 kHz
Voltage: 12 V dc to 30 V dc
Current: 5 mA max.

Supply Protection Circuitry
Protected against reverse polarity and transient voltages

Construction
Nickel plated aluminum housing
Polycarbonate or borosilicate glass window

Light Characteristics
Color temperature (CCT): 6200K (+500, -550K)
Color: Cool white

Lumen Output
1300 lumens for 340 mm models (typical at 25° C)
2600 lumens for 640 mm models (typical at 25° C)
Luminous efficacy: 87 lumens/watts typical at 24 V dc at 25° C
CRI: 80, minimum

Spacing Criterion
0.86

LED Lifetime
Lumen Maintenance - L_{70}
When operating within specifications, output will decrease less than 30% after 60,000 hours

Supply Current

Length (mm)	Max. Current Draw	Typical Current Draw
340	1.40A at 12 V dc	1.30A at 12 V dc
	0.70A at 24 V dc	0.59A at 24 V dc
	0.56A at 30 V dc	0.47A at 30 V dc
640	3.10A at 12 V dc	2.80A at 12 V dc
	1.53A at 24 V dc	1.17A at 24 V dc
	1.22A at 30 V dc	0.97A at 30 V dc

Connections

Integral 4-pin M12/Euro-style male quick disconnect or 2 m (6.5 ft) integral cable
Mating cordset required for quick disconnect models

Test Data

LM-79, LM-80, TM-21

Application Notes

When connecting cascadable lights in series, it is important not to exceed the maximum current limitation of 4 Amps.

Input Voltage	Max. Number of Units	
	340 mm Models	640 mm Models
12 V dc	2	1
24 V dc	5	2
30 V dc	7	3

Storage Temperature

–40 °C to +70 °C (–40 °F to +158 °F)

Operating Temperature

–40 °C to +50 °C (–40 °F to +122 °F) at the maximum intensity setting
–40 °C to +70 °C (–40 °F to +158 °F), at PWM dim settings with a 1 to 70% duty cycle

Environmental Rating

IEC IP67, JIS C IP68G, IP69K per DIN 40050-9

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

Certifications

Required Overcurrent Protection

WARNING: Electrical connections must be made by qualified personnel in accordance with local and national electrical codes and regulations.

Overcurrent protection is required to be provided by end product application per the supplied table.
Overcurrent protection may be provided with external fusing or via Current Limiting, Class 2 Power Supply.
Supply wiring leads < 24 AWG shall not be spliced.
For additional product support, go to *www.bannerengineering.com*.

Supply Wiring (AWG)	Required Overcurrent Protection (Amps)
20	5.0
22	3.0
24	2.0
26	1.0
28	0.8
30	0.5

Performance Curves

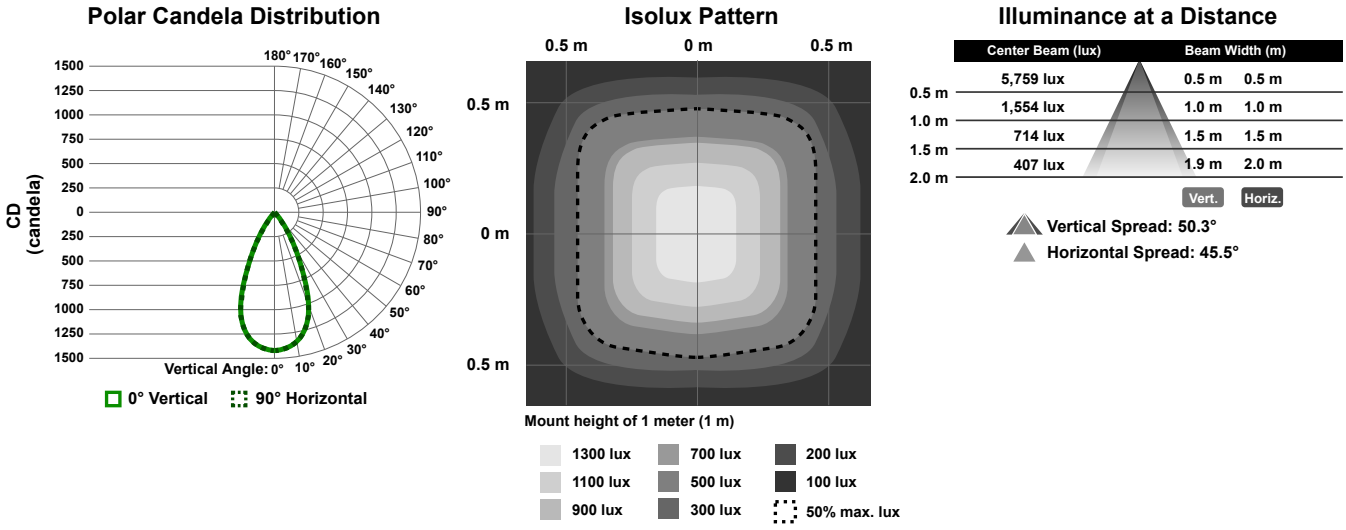


Figure 1. 340 mm Models

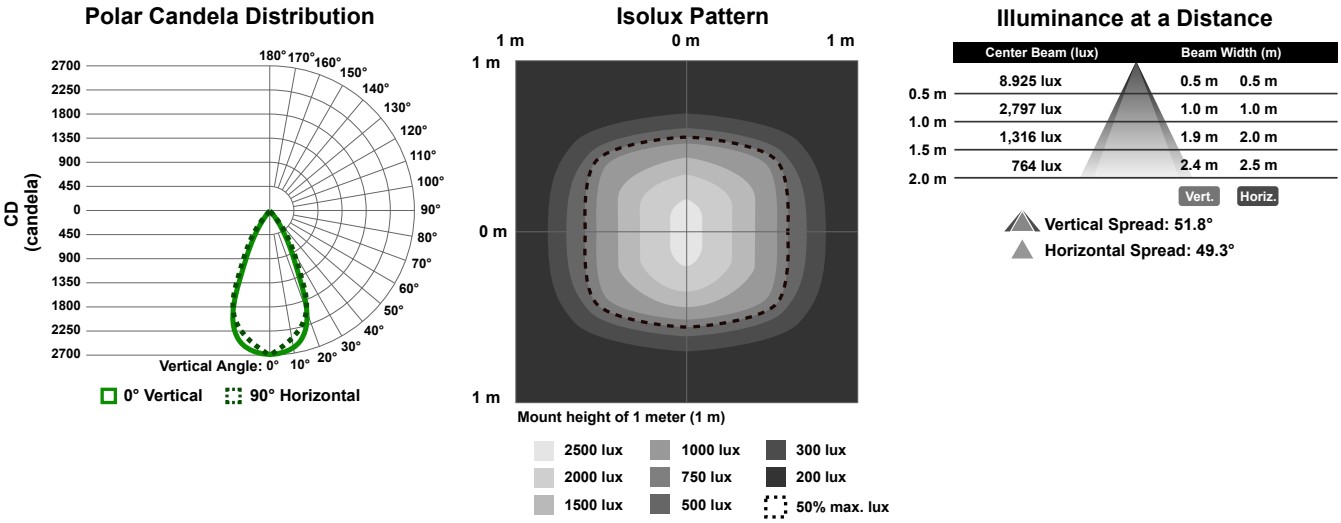


Figure 2. 640 mm Models

Dimensions for WLC60 (Dimmable) 340 mm Models

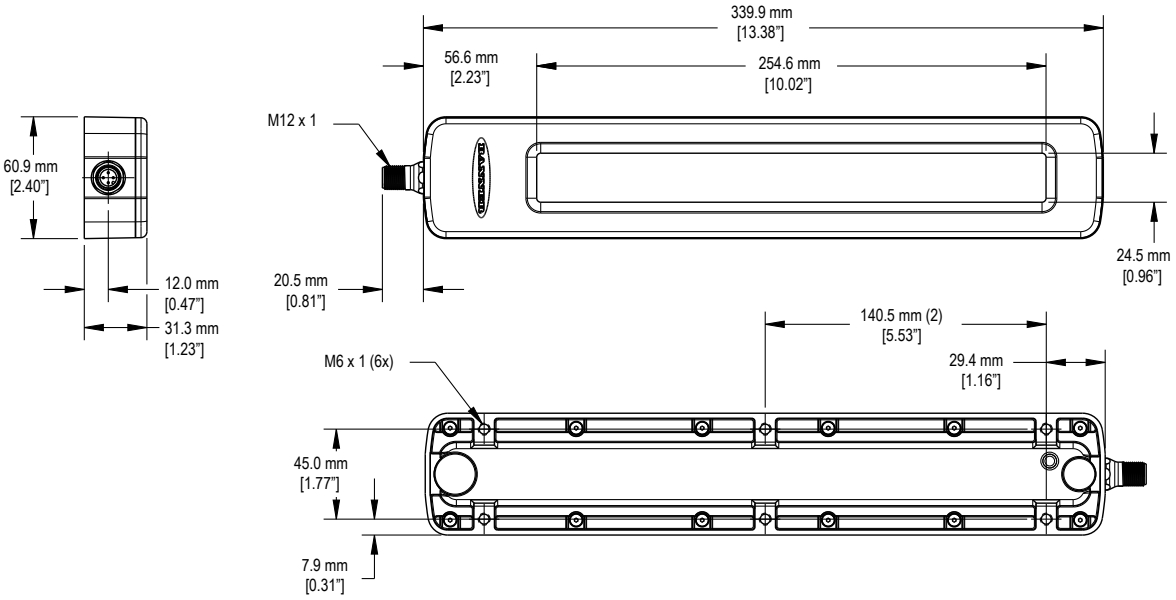


Figure 3. WLC60 (340 mm) Base Mount Side Exit Models

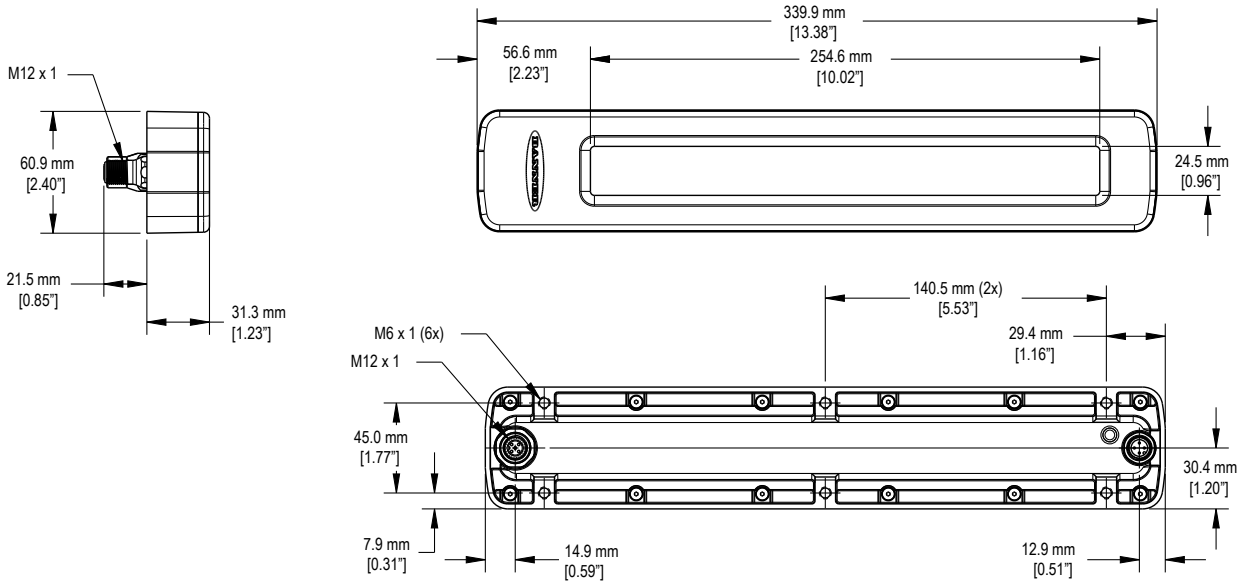


Figure 4. WLC60 (340 mm) Base Mount Rear Exit Models

Dimensions for WLC60 640 mm Models

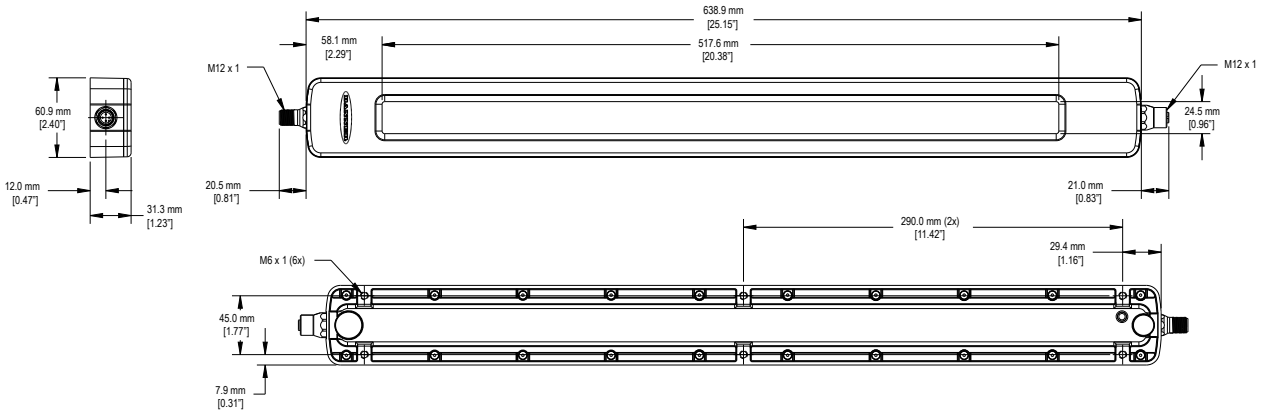


Figure 5. WLC60 (640 mm) Base Mount Side Exit Models Dimensions

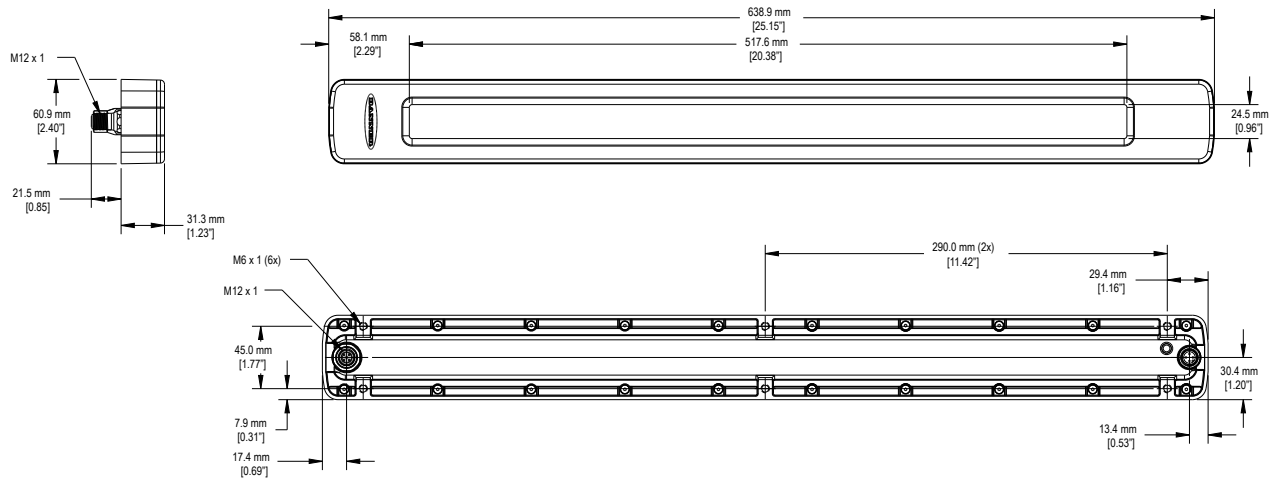
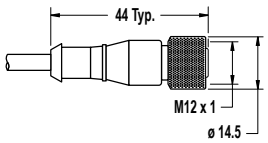
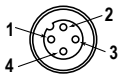
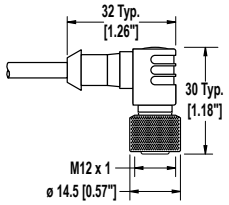
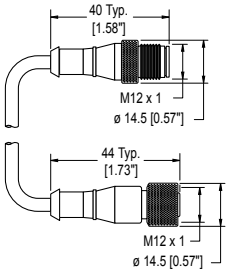
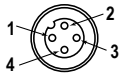
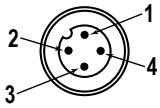
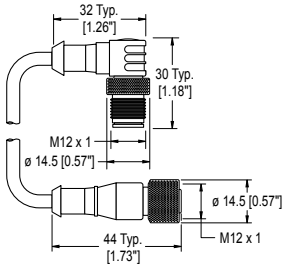


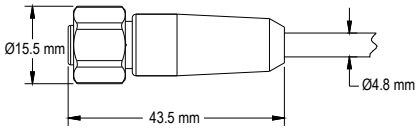
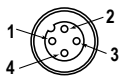
Figure 6. WLC60 (640 mm) Base Mount Rear Exit Models Dimensions

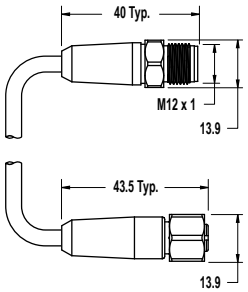
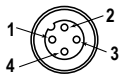
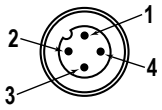
Accessories

Cordsets

4-Pin Threaded M12/Euro-Style Cordsets—Single Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**
MQDC-406	1.83 m (6 ft)	Straight		 1 = Brown 2 = White 3 = Blue 4 = Black
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  Male  1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-403SS	0.91 m (3 ft)			
MQDEC-406SS	1.83 m (6 ft)			
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)			
MQDEC-403RS	0.91 m (1 ft)	Male Right-Angle/ Female Straight		
MQDEC-406RS	1.83 m (3 ft)			
MQDEC-412RS	3.66 m (12 ft)			
MQDEC-420RS	6.10 m (20 ft)			
MQDEC-430RS	9.14 m (30 ft)			
MQDEC-450RS	15.2 m (50 ft)			

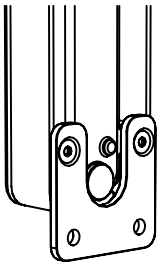
4-Pin Threaded M12/Euro-Style Cordsets—Washdown, Stainless Steel, Single Ended				
Model	**Length**	**Style**	**Dimensions**	**Pinout (Female)**
MQDC-WDSS-0406	1.83 m (6 ft)	Straight		 1 = Brown 2 = White 3 = Blue 4 = Black
MQDC-WDSS-0415	4.57 m (15 ft)			
MQDC-WDSS-0430	9.14 m (30 ft)			

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		Female  Male  1 = Brown 2 = White 3 = Blue 4 = Black
MQDEC-WDSS-403SS	0.91 m (3 ft)			
MQDEC-WDSS-406SS	1.83 m (6 ft)			
MQDEC-WDSS-412SS	3.66 m (12 ft)			

Brackets

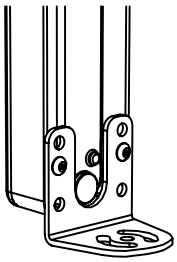
LMBWLC60F

- Set of two flat brackets
- 300 series stainless steel
- Includes M6 flathead screws for mounting to light
- Clearance for M6 or 1/4-20 mounting hardware



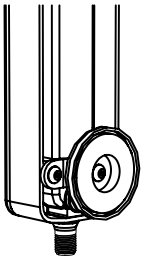
LMBWLC60RA

- Set of two right-angle brackets
- 300 series stainless steel
- Includes M6 button head screws for mounting to light
- Clearance for M6 or 1/4-20 mounting hardware



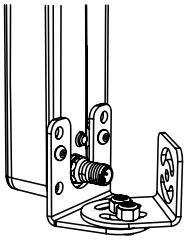
LMBWLC60MAG

- Magnetic mounting kit (set of two)
- Two inch magnets
- Mounting hardware included



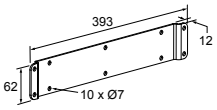
LMBWLC60RAS

- Pair of two swivel mount, right-angle brackets
- 300 series stainless steel
- Includes hardware for mounting to light



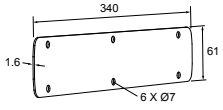
LMBWLC60B340

- Plate for sealing the cavity on the back of the 340 mm models
- 300 series stainless steel
- Includes hardware for mounting to the light



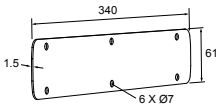
ACC-WLC60-340-GSK-FDA-1

- Blue FDA-approved silicone gasket
- Thickness: 1.6 mm



ACC-WLC60-340-GSK-N-1

- Black nitrile gasket
- Thickness: 1.5 mm



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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*.

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San Pedro Garza Garcia Nuevo Leòn, C. P. 66269

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