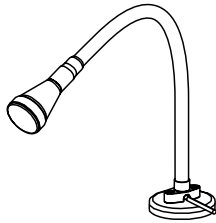


Flex Arm Light

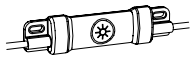


Datasheet

General Purpose LED Work Lights



- Designed for desk, work station, enclosure, and small area lighting
- Excellent, even light distribution for close range lighting applications
- WL50 models offer touch and PWM control for on/off and dimming functions
- Touch models can be actuated with bare hands or gloves via the integrated capacitive switch on the face of the light
- Plug and play with 300 mm M12 cable connection directly into PSW-24-1 or other power supply (sold separately)
- 457 mm (18 in) long, vinyl coated flexible arm
- WL50 and S18 options available with different light outputs



For remote PWM dimming, use with the LC15T-127AP1RBGQP dimmer module. For more information, refer to the LC15T In-Line Touch Switch datasheet, p/n [217460](#).

Models

Table 1: WL50 Light Models


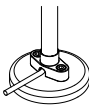
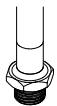
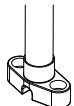
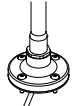
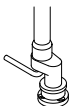

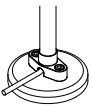
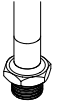
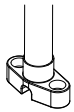
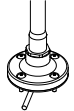
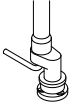



Model Number	Light	Control	Base Connection or Bracket	
K-FLX18-50TWD MAGDQP	 WL50	Touch	Magnet	
K-FLX18-50WDMAGDQP		No button		
K-FLX18-50TW12XQP		Touch	1/2-14 NPSM	
K-FLX18-50W12XQP		No button		
K-FLX18-50TWDXQP		Touch	2 x 1/4-20W 1.375 spacing	
K-FLX18-50WDXQP		No button		
K-FLX18-50TW12FQP		Touch	Flange	
K-FLX18-50W12FQP		No button		
K-FLX18-50TWQCXQP		Touch	Quick Connect	
K-FLX18-50WQCXQP		No button		



Table 2: S18 Light Models

Model Number	Light	Control	Base Connection or Bracket	
K-FLX18-18WDMAGDQP	 <p>S18</p>	No button	Magnet	
K-FLX18-18W12XQP			1/2-14 NPSM	
K-FLX18-18WDXQP			2 x 1/4-20W 1.375 spacing	
K-FLX18-18W12FQP			Flange	
K-FLX18-18WQCXQP			Quick Connect	

Device Configuration (WL50 Touch Models Only)

Device Interface	Function
 <p>Single Touch</p>	<p>ON/OFF</p> <p>A single touch in the off-state turns the device on. A single touch in the on-state turns the device off.</p>
 <p>Touch and Hold</p>	<p>Lumen Control</p> <p>Touch and hold to increase the Lumen Output from 10% to 100%. Continue to touch and hold to decrease the Lumen Output from 100% to 10%.</p>
 <p>Double Touch</p>	<p>100% ON</p> <p>Double touch to return to 100% Lumen Output.</p>



Note: The unit flashes at the maximum and the minimum state to notify user that the limit has been reached.

Wiring

Wiring Diagram	Connection	Pin	Wire Color	Pinout (Male)	Pinout (Female)
	V DC	1	Brown		
	Not used	2	White		
	DC common	3	Blue		
	WL50 models: Pulse width modulation (PWM) input. For maximum intensity, leave the black wire floating or connected to common. Connecting to 12 V DC to 30 V DC causes LEDs to shut off. S18 models: No PWM input.	4	Black		

Specifications

WL50-3

Supply Voltage

12 V DC to 30 V DC
Use only with a suitable Class 2 power supply (UL) or SELV power supply (CE)

Supply Current

Model	Max. Current Draw (A) at 12 V DC	Typical Current Draw (A)		
		12 V DC	24 V DC	30 V DC
WL50-3	0.250	0.220	0.100	0.085

Power-Up Response Time

1 ms maximum for touch models

Dimming and Control

Non-touch models: PWM frequency 100-600 Hz
Touch models: On/off, 10% to 100% dimming, and PWM input
See [Device Configuration \(WL50 Touch Models Only\)](#) on p. 2 for detailed function

Pulse Width Modulation (PWM)

Frequency: Up to 600 Hz
Voltage: 12 V DC to 30 V DC
Current: 3 mA maximum
Duty Cycle Range:
Off - 0%
On - 100%

Supply Protection Circuitry

Protected against reverse polarity and transient voltages

Construction

Housing: Polycarbonate
Flex Arm: Vinyl coated material

Mounting

Mounting hardware included
Refer to model table and dimensions for specific mounting

Connections

Terminal model: 3 color-coded screw terminals for up to 16 AWG wire, screw terminal maximum torque 0.11 N·m (1.0 lbf·in)
Flex arm: 300 mm (11.8 in) PVC cable with an 4-pin M12 quick disconnect

Certifications and Approvals



Environmental Rating

The illuminated side of the terminal models meets IEC IP65, IEC IP67, and IP69K per DIN 40050-9 when installed in an enclosure
Terminal connection points meet IEC IP00

LED Lifetime

Lumen maintenance - L70
When operating within specifications, output will decrease less than 30% after 50,000 hours.

Operating Temperature

-40 °C to +50 °C (-40 °F to +122 °F)

Storage Temperature

-40 °C to +70 °C (-40 °F to +158 °F)

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
Impact: IK06 (IEC EN 60068-2-75)

Third Wire Functionality

Touch models: PWM input overrides touch control
Standard models: PWM input full on-off, with 10%-100% dimming

Light Characteristics

Daylight White Efficacy: up to 125 lumens/watt typical at 24 V DC at 25 °C (77 °F)
CRI: 82, typical

Model	Color	Color Temperature (CCT)	Lumens (Typical at 25 °C)	Watts at 24 V DC	Luminous Efficacy (lm/w)
WL50-3	Daylight White	5000 K (±300 K)	300	2.4	125

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

For complete information on the WL50-3 light, refer to literature part number [219928](#).

S18DLH

Supply and Voltage Current

9 V DC to 30 V DC
60 mA at 9 V DC; 25 mA at 30 V DC

Indicator Response Time

Indicator ON/OFF: 1 ms max

Indicator Characteristics

Color	Color Temperature (CCT)	Lumen Output (Typical at 25 °C)
Daylight White	5000 K	20

Connections

Terminal models: 4 color-coded screw terminals for up to 16 AWG wire, depending on model, screw terminal max. torque 0.11 N·m (1.0 lbf·in)
Flex arm: 300 mm (11.8 in) PVC cable with a 4-pin M12 quick disconnect

Environmental Rating

Indicator side of terminal models meet IEC IP67 and IP69K per DIN 40050-9 when installed in an enclosure. Screw connection points meet IEC IP00

Certifications



Operating Conditions

-40 °C to +60 °C (-40 °F to +140 °F)

Construction

Housing: Polycarbonate
Flex Arm: Vinyl coated metal

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

For complete information on the S18DLH light, refer to literature part number [177054](#).

Dimensions

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

Figure 1. Light dimensions

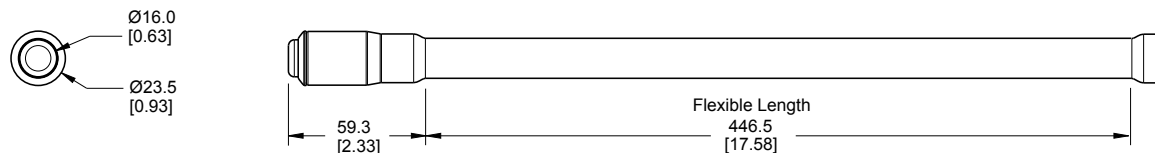
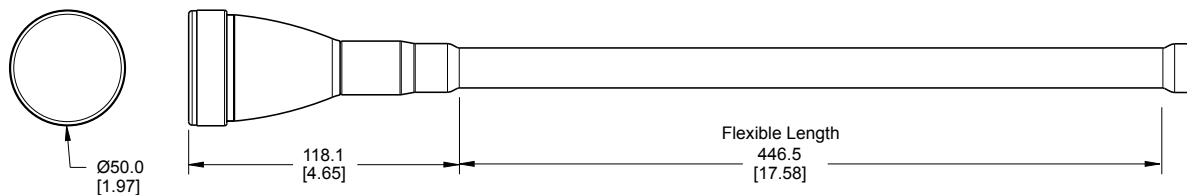


Figure 2. Direct mount base

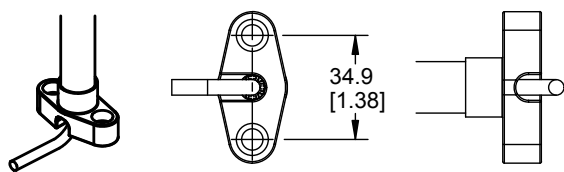


Figure 3. Flange mount base

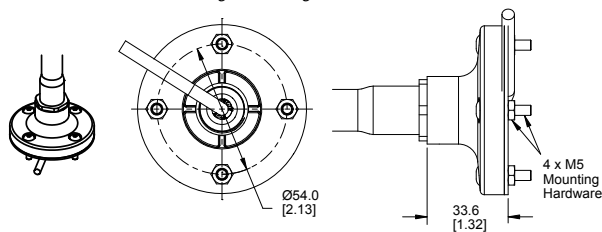


Figure 4. Magnet mount base

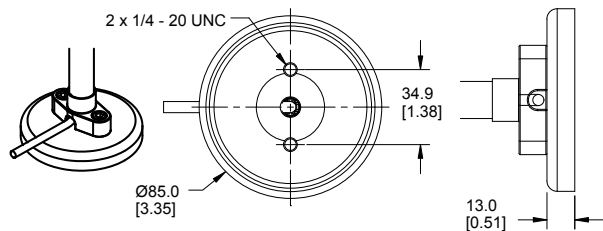
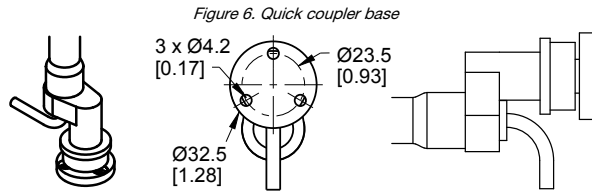
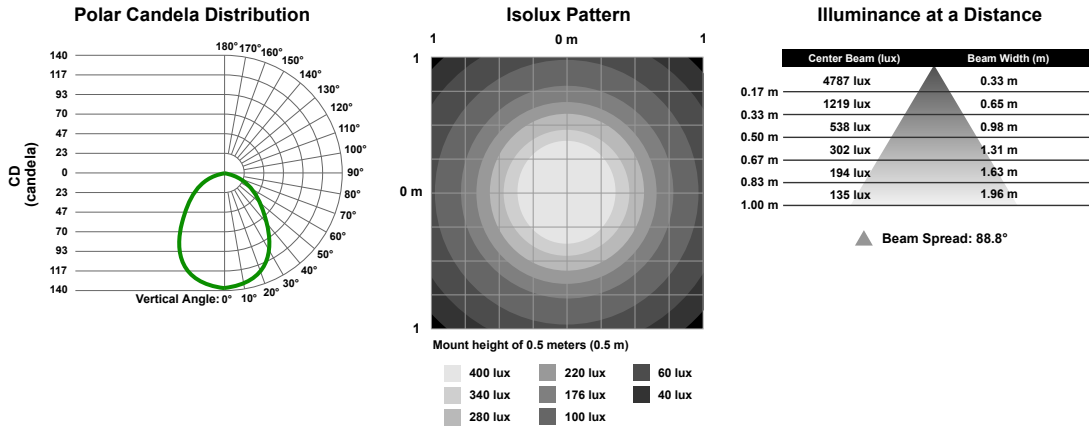


Figure 5. NPSM mount base



Photometric Data (WL50 Models Only)



Accessories

Power Supply

PSW-24-1

- 24 V DC, 1 A Class 2 UL Listed power supply
- 100 V AC to 240 V AC 50/60 Hz input
- 2 m (6.5 ft) PVC cable with M12 quick disconnect
- Includes Type A (US, Canada, Japan, Puerto Rico, Taiwan), Type C (Germany, France, South Korea, Netherlands, Poland, Spain, Turkey), Type G (United Kingdom, Ireland, Singapore, Vietnam), and Type I (China, Australia, New Zealand) AC detachable input plugs



Cordsets

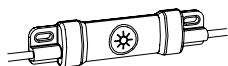
4-Pin Threaded M12 Cordsets—Single Ended				
Model	Length	Style	Dimensions	Pinout (Female)
MQDC-406	2 m (6.56 ft)	Straight		<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
MQDC-415	5 m (16.4 ft)			
MQDC-430	9 m (29.5 ft)			
MQDC-450	15 m (49.2 ft)	Right-Angle		
MQDC-406RA	2 m (6.56 ft)			
MQDC-415RA	5 m (16.4 ft)			
MQDC-430RA	9 m (29.5 ft)			
MQDC-450RA	15 m (49.2 ft)			

4-Pin Threaded M12 Cordsets—Double Ended				
Model	Length	Style	Dimensions	Pinout
MQDEC-401SS	0.31 m (1 ft)	Male Straight/Female Straight		<p>Female</p> <p>Male</p> <p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
MQDEC-403SS	0.91 m (2.99 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 (30.2 ft)			
MQDEC-450SS	15.2 m (49.9 ft)			

Dimmers and Switches

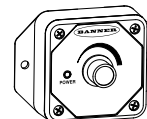
LC15T Series

- **LC15T-127AL2RGQP** model with On/Off control and illuminated indication
- **LC15T-127AP1RBGQP** model with On/Off/Dimming control and illuminated indication
- In-line capacitive touch switch with M12 connectors
- Rated for up to 30 V DC and 4 A maximum output current
- Rugged and waterproof IEC IP67 housing



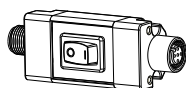
LC65P1T

- Potentiometer with terminal and M12 connector options
- PWM control
- Rated for up to 30 V DC and 4 A maximum output current
- Unsealed IEC IP20 housing



WLS28PBQ

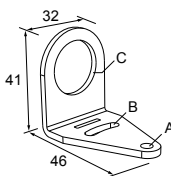
- 2 position in-line switch with M12 connectors
- Used with 2-wire DC LED lights
- Rated for up to 30 V DC and 4 A maximum output current
- IEC IP50 housing



Brackets

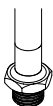
SMB22A

- Right-angle bracket with curved slot for versatile orientation
- 12-ga. stainless steel
- Mounting hole for 22 mm sensor



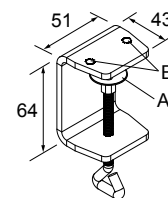
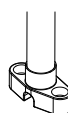
Hole center spacing: A to B = 26.0
Hole size: A = \varnothing 4.6, B = 4.6 x 16.9, C = 22.2

Used with Flex Arm Light models with 1/2-14 NPSM Base Connection



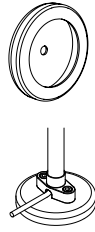
SMBFLXCLAMPD

- Used with Flex Arm Light models with D base mount option, 2 x 1/4-20W 1.375 spacing



SMBFLXMAGR

- Protective magnet cover
- Prevents scratches to painted surfaces
- Used with magnet base option



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.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED (INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), AND WHETHER ARISING UNDER COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE.

This Warranty is exclusive and limited to repair or, at the discretion of Banner Engineering Corp., replacement. **IN NO EVENT SHALL BANNER ENGINEERING CORP. BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY EXTRA COSTS, EXPENSES, LOSSES, LOSS OF PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM ANY PRODUCT DEFECT OR FROM THE USE OR INABILITY TO USE THE PRODUCT, WHETHER ARISING IN CONTRACT OR WARRANTY, STATUTE, TORT, STRICT LIABILITY, NEGLIGENCE, OR OTHERWISE.**

Banner Engineering Corp. reserves the right to change, modify or improve the design of the product without assuming any obligations or liabilities relating to any product previously manufactured by Banner Engineering Corp. Any misuse, abuse, or improper application or installation of this product or use of the product for personal protection applications when the product is identified as not intended for such purposes will void the product warranty. Any modifications to this product without prior express approval by Banner Engineering Corp will void the product warranties. All specifications published in this document are subject to change; Banner reserves the right to modify product specifications or update documentation at any time. Specifications and product information in English supersede that which is provided in any other language. For the most recent version of any documentation, refer to: www.bannerengineering.com.

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