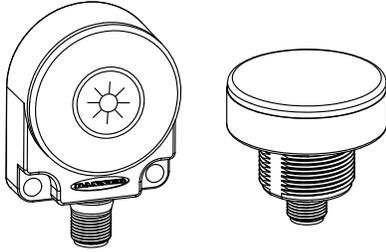


# WL50-3 LED Work Light



## Datasheet

General Purpose LED Work Lights



Shown are flat-mount model with touch-button and 30 mm base-mount model without the touch-button

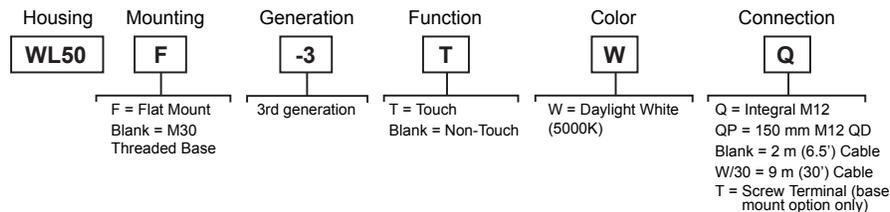
- Designed for desk, work station, enclosure, and small area lighting
- Optimized for use with flex arm mount for adjustable, industrial task lighting <sup>1</sup>
- Excellent, even distribution for close range lighting applications
- Standard or touch models available
- Touch models can be actuated with bare hands or gloves via the integrated capacitive switch on the face of the model
- Flat-mount or 30 mm base-mount models available
- Cabled, quick-disconnect, and terminal connection models available
- Rugged, sealed polycarbonate housing rated to IEC IP65, IEC IP67, and IP69K
- Low-profile design with several mounting options
- 12 V DC to 30 V DC operation
- High lumen output and low power consumption at less than 3 watts
- Touch models are dimmable via the touch interface, and all models are dimmable via PWM <sup>2</sup> input on the control wire



For 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

Flat mount models include a 48 mm (1.9 in) circular velcro mounting kit for easy mounting with no additional hardware.



## Device Configuration

Device Interface	Function
 <b>Single Touch</b>	<p><b>ON/OFF</b></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>
 <b>Touch and Hold</b>	<p><b>Lumen Control</b></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>
 <b>Double Touch</b>	<p><b>100% ON</b></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.

<sup>1</sup> Flex Arm Lights are available pre-assembled with integrated WL50 light for plug and play operation with available power supplies. Refer to the Flex Arm Light literature, p/n 222095, and PSW-24-1 Power Supply literature, p/n 214507.

<sup>2</sup> Pulse width modulation is a digital way to represent an analog value by varying the width of pulses at a constant frequency. The duty cycle (on-time versus off-time) is measured in percent from 1-100.



## Wiring

Diagram	Wire	Connection	Pinout (Male)	Pinout (Female)
	1 - Brown	12 V DC to 30 V DC	<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>	<p>1 = Brown 2 = White 3 = Blue 4 = Black</p>
	2 - White	Not used		
	3 - Blue	DC common		
	4 - Black	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.		

## Specifications

### 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](#) on p. 1 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  
Connector: Nickel-plated quick-disconnect or PVC-jacketed cable

### Mounting

Base mount: M30 x 1.5 threaded base, maximum torque 4.5 N-m (40 in-lbf)  
Flat: Included 48 mm (1.9 in) circular velcro mounting kit

### Connections

Integral 4-pin M12 male quick disconnect, 150 mm (6 in) PVC cable with an M12 quick disconnect, or 2 m (6.5 ft) integral PVC cable, depending on model  
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)

### Environmental Rating

Rated IEC IP65, IEC IP67, and IP69K per DIN 40050-9  
Cabled models meet IP69K per DIN 40050-9 if the cable is protected from high-pressure spray  
The illuminated side of the terminal models meet 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

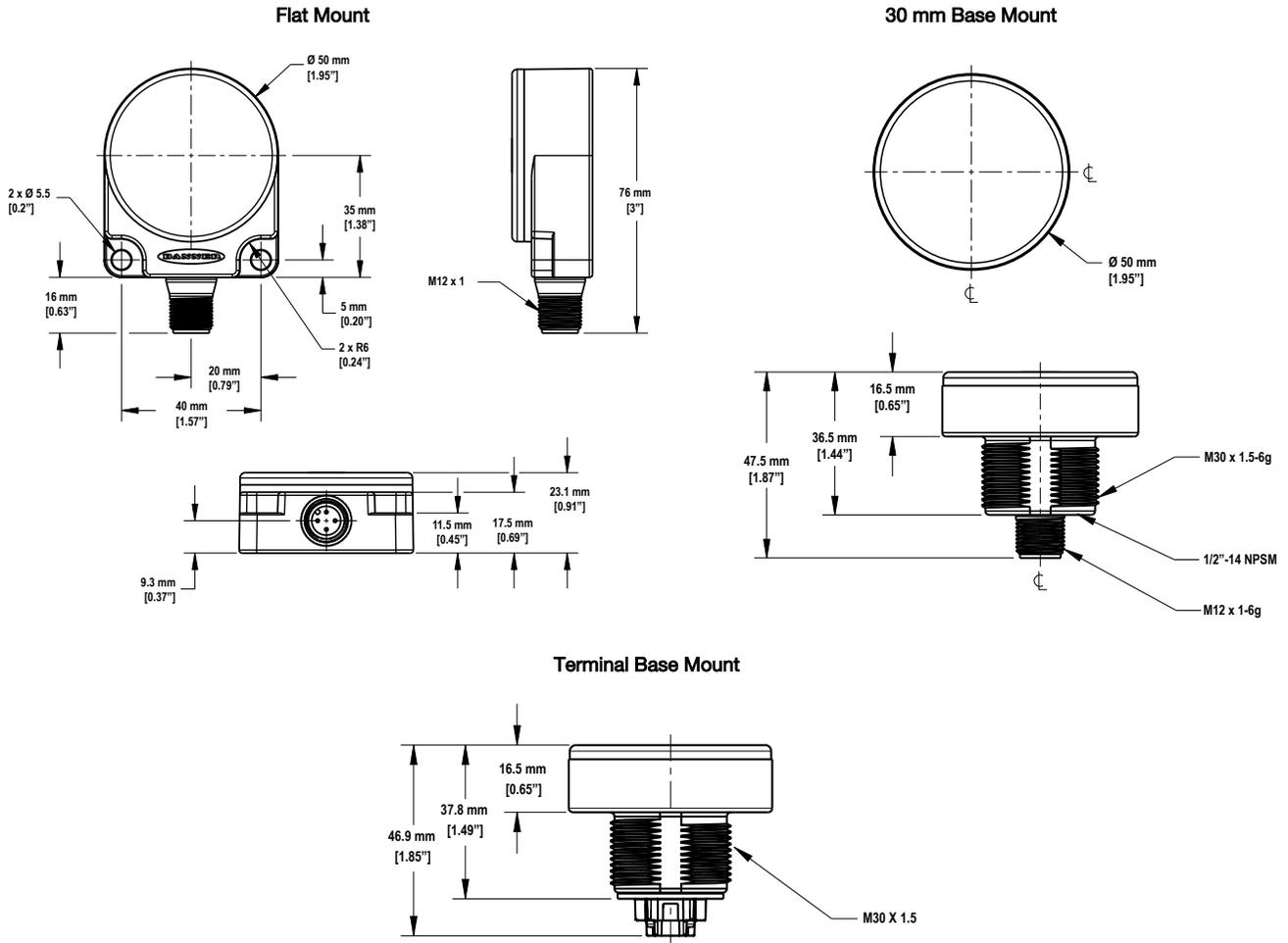
Model	Color	Color Temperature (CCT)	Lumens (Typical at 25 °C)	Watts at 24 V DC	Luminous Efficacy (lm/w)
WL50-3	Daylight White	5000 K (±300 K)	300	2.4	125

### Certifications and Approvals

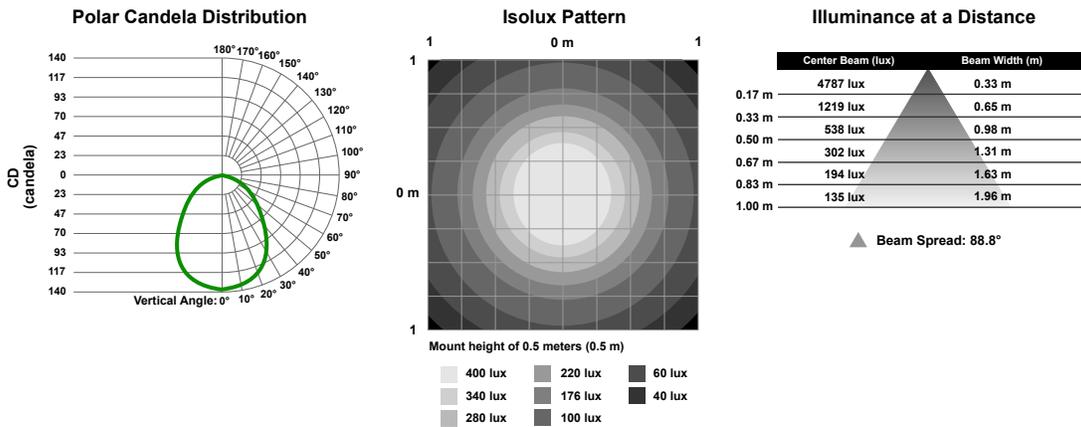


## Dimensions

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

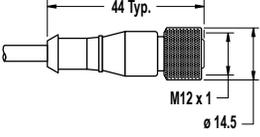
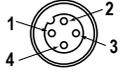
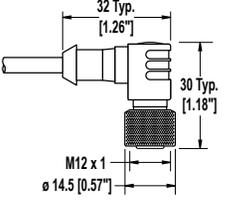


## Photometric Data



## Accessories

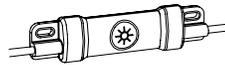
### Cordsets

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)			

### Dimmers

#### LC15T-127AP1RBGQP

- In-line capacitive touch switch with M12 connectors
- On/Off or PWM control with illuminated indication
- Rated for up to 30 V DC and 4 A maximum output current
- Rugged and waterproof IEC IP67 housing



#### LC65P1T

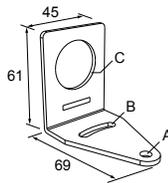
- Potentiometer with terminal and M12 connector options
- PWM control
- Rated for up to 30 V DC and 4 A maximum output current
- Unsealed IEC IP20 housing



### Brackets

#### SMB30A

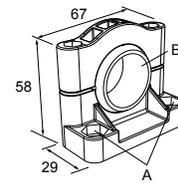
- Right-angle bracket with curved slot for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor
- 12-ga. stainless steel



Hole center spacing: A to B=40  
Hole size: A=ø 6.3, B=27.1 x 6.3, C=ø 30.5

#### SMB30SC

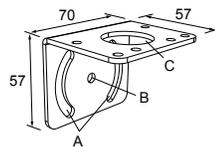
- Swivel bracket with 30 mm mounting hole for sensor
- Black reinforced thermoplastic polyester
- Stainless steel mounting and swivel locking hardware included



Hole center spacing: A=ø 50.8  
Hole size: A=ø 7.0, B=ø 30.0

#### SMB30MM

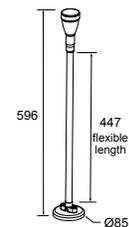
- 12-ga. stainless steel bracket with curved mounting slots for versatile orientation
- Clearance for M6 (¼ in) hardware
- Mounting hole for 30 mm sensor



Hole center spacing: A = 51, A to B = 25.4  
Hole size: A = 42.6 x 7, B = ø 6.4, C = ø 30.1

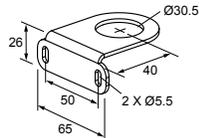
#### Flex Arm Light

- Fully assembled plug and play
- 457 mm (18 in) long
- See Flex Arm Light literature, p/n 222095

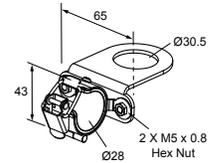


**LMB30LP**

- Low profile
- 30 mm mounting hole
- 300 series stainless steel

**LMB30LPC**

- For 28 mm tubular racking
- LMB30LP attached to clamp bracket
- Toolless mount to racking
- 30 mm mounting hole



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