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LEDP10W-1R

High Intensity LED Light - Single 10 Watt LED - 9-50VDC - 280' Spot Beam

Product ID: 48484

Please see last page for supporting documentation for this product(certificates, CAD files & drawings, IES files, wiring diagrams, etc).



Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.

LEDP10W-1R LED Light

Lamp Type: CREE XLamp MC-E® LED
Dimensions: 2"-OD 2"-H 2.5"-Depth
Watts: 10
Led Drive %: 90%

Voltage: 9-46 VDC
Spot Beam: 280`L x 70`W
Flood Beam: 70`L x 65`W
Lighting Configuration: 20° Spot or 40° Flood

Mounting: Flat Surface or Tube - Adjustable

Wiring: Deutsch IPD / LADD DT04-2P connector

Amps: 1/4 (on 12 volts)

Lumens: 860
LED Light Color: 6000K

LED Life Expectancy: 50,000 hours

Optics Efficiency: 90%

Materials: Aluminum Housing, Polycarbonate Lens

Housing Colors: Black or White

CE Certified

3 year warranty replacement on this LED light. After 30 days, the customer ships the failed LED light and/or LED bulb to Larson Electronics at their expense. If the failure is a manufacturer defect, we will ship a new replacement to the customer. If failure occurs within 30 days of receipt, Larson Electronics will provide a return label

Internal LED Driver Features

Fast average current control
Programmable off-time switching
Linear dimming input
PWM dimming input

Short protection w/Skip mode

Ambient Op Temp -40C to +125C

Pin-compatible with the HV9910B

View Avg-Mode Driver Control PDF

Special Orders - Special Requirements

Contact us for special requirements

Toll Free: 1-800-369-6671

Intl: 1-903-270-1187

E-mail: sales@larsonelectronics.com

via email to the customer. When the failed light is returned, Larson Electronics will ship a new replacement.

Buy American Compliant

The LEDP10W-1R LED Light Bar is ideal for a wide variety of uses including equipment, vehicle, military, law enforcement and industrial manufacturing applications. This ultra compact LED light produces an 860 lumen output with low voltage and amp draw, 50,000 hour service life and 9 to 46 volt compatibility providing operators with a versatile and powerful LED lighting solution.

The LEDP10W-1R LED light emitter from Larson Electronics produces 860 lumens of bright light while drawing only 10 watts @1/4 amp from a 12 volt electrical system. A single CREE XLamp MC-E® 10 watt LED producing 860 lumens is combined with high purity optics to produce a 20 degree spread spot beam approximately 280' long by 60' in width. We also offer floodlight versions with a 40 degree beam spread to provide more light over a larger area nearer the fixture, making flood versions ideal for use as work lights. This particular unit is ultra compact at only 2 inches in OD (outer diameter) by 2 inches tall, by 2.5 inches deep, which makes it ideal for applications where electrical power and mounting space is at a premium.

Another unique feature of this LED light is that the side brackets enable the operator to connect multiple units together. Thus, operators can combine any number of units to achieve the power and dimensions required for most any application. The LEDP10W series LED lights are waterproof to 3 meters, sealed against intrusion by dust and dirt and very ruggedly constructed to withstand the most demanding environments, conditions and applications. An integral Pulse Width Modulation controller, small profile, low power requirements, high durability and versatile mounting makes these LED lights ideal for a wide array of applications including but not limited to: military, industrial manufacturing, machine visioning, security and law enforcement, boating, offroading and commercial structure illumination.



This photo shows an open field illuminated only by ambient light at approximately 9:00 pm.



This photo shows the LEDP10W-1R in flood configuration. Notice a more abundant amount of light, closer to the fixture. Approx. dimensions of the beam are 100`L X 80`W.

Heat Management: Heat is the single largest factor in premature LED failure and color shifting. These LED units contain advanced drivers which use pulse width modulation to control heat buildup rather than simple voltage regulators which are typically harsh on sensitive electronics and can contribute to early LED failure. These units automatically sense the temperature of each LED and adjust the energy frequency or "duty cycle" accordingly to maintain heat levels within acceptable ranges. This system in essence flashes current at an extremely fast on and off rate to each LED based upon the LED's core temperature. This flash rate is too fast to detect with the human eye, but provides precise control of the current flowing to each LED and thus the heat it generates. This allows the LEDs to be driven at up to 100% capacity without overheating or visible loss of light output. The LEDs are always driven at the same voltage but the duty cycle, however, is

changed to alter how long the LEDs are actually on or off. The end result is more light with less heat and longer LED life with an average 70% lumen maintenance after 50,000 hours.

PWM Control: The pulse width modulation drivers in this unit also provide secondary benefits through the ability to tap into a provided input wire with an external pulse generator and adjust the duty cycle of the current being applied to the LEDs. Thus you can connect an external dimmer, switch or pulse control and adjust the perceived output of the light, effectively causing the light to flash, dim or brighten to the desired levels. Additionally, this method of controlling light output results in a corresponding drop in amperage draw, so if the duty cycle is cut back to 50% there will be a matching 50% reduction in amperage draw. These units are also able to monitor and adjust input current to maintain the correct LED voltage levels regardless of input levels across a specific range. These LEDP10W series light bars can operate on current ranging from 9 to 46VDC without any modifications necessary as a result. This ability to sense and adjust input current also provides protection against voltage spikes and drops that can occur in vehicle electrical systems which would otherwise result in burning up or premature LED failure without it.

Click Photo to Enlarge | Click Photo to Enlarge
Click Photo to Enlarge | Click Photo to Enlarge | Click Photo to Enlarge

Durability: As well as unparalleled heat control, the LEDP10W series of LED light bars from Larson Electronics also offer IP68 rated construction that is designed to withstand extremes of environmental and operating conditions. These units can withstand rapid temperature changes of -40 degrees Celsius to 85 degrees Celsius, are waterproof to three meters and resist ingress of dust, dirt and humidity. The housings are formed from extruded aluminum and the lenses are unbreakable polycarbonate. The CREE XLamp MC-E® LEDs offer resistance to shocks and vibrations and are rated at 70% lumen maintenance after 50,0000 hours of use.

Mounting: Each unit is equipped with aluminum mounting blocks which slide within the aluminum housing to allow users to adjust their positioning to match existing or user drilled mounting holes. Each aluminum mounting block has an integrated rubber bushing to absorb vibrations and shocks. To secure the lights in place users simply slide the mounting bolts through the aluminum mounting block and rubber isolator, through the mounting surface, then secure the bolt with a locking nut on the opposite side of the mounting surface. This mounting system enables mounting to flat or round surfaces and allows for minimal 7 degrees of flexibility of angle placement of the light. For increased adjustability please see our trunnion mounted versions which add a wider degree of vertical angle adjustment.

Note: Most Larson Electronics LEDLB, LEDP3W, LEDP10W, and LED10W series LED spotlights and floodlights are terminated with a Deutsch IPD / LADD DT04-2P connector. The mating connector plug is DT06-2S. Most LEDLB, LEDP10W and LED10W series lights ship with mating connector as part of a harness or pigtail, depending on the model. Some larger LED lights like the LEDLB-160X2 or LEDLB-200X2 or multiple function LED lights (i.e. high/low beam, modulating, IR/Visible combos) will have different Deutsch connectors.

LEDP10W-1R 40° Flood Beam (Opt)

LEDP10W-1R 20° Wide Spot Beam (Stnd)

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CONDITIONS

Vin min (V) = 9	**toff (us) = 2.9**
Vin nom (V) = 12	**R1 (kohm) = 50.2**
Vin max (V) = 50	**L1 (uH) = 3.0**
Vo min (V) = 6.5	**L-Pk (A) = 2.9**
Vo nom (V) = 6.8	**L-rms (A) = 2.9**
Vo max (V) = 7	**Ipk (A) = 2.5**
I-LED (A) = 2.2	**R2 (ohm) = 0.10**
Efficiency = .85	**I-FET (A) = 2.2**
fsw nom (kHz) = 150	**fs min (kHz) = 77**
Ts nom (us) = 6.666667	**fs max (kHz) = 301**
Base frequency-	= 36~37Khz @ 12V
Amplitude of pulse width-	= 27Ms
Outside: External dimmer-	= 500Hz
Inside : Current sensing from-	77KHz at 12V to 300KHz at 50V

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Frequently Asked Questions (FAQ)


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dimmer

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LEDP10W-1R

Product ID: 48484

Harmonized System (HS) Code: 9405.41.84.10
Export Control Classification Number (ECCN): EAR99

Options:

LEDP10W-1R-Finish-Beam Pattern

Example: LEDP10W-1R-BLK-SP

Finish	
BLACK	-BLK
WHITE	-WHT

Beam Pattern	
SPOT	-SP
FLOOD	-FL

Links (Click on the below items to view):

- CE Certificate
- Dimensional Drawing 2D
- DXF (2D CAD Model)
- MSDS (Material Safety Data Sheet
- Operations Manual
- RoHS Certificate (Restriction of Hazardous Substances)
- Solidworks EASM File
- Solidworks eDrawing (32bit)
- Solidworks eDrawing (64bit)
- STEP File (3D CAD Model)
- HigResPic1
- HigResPic2
- HigResPic3
- HigResPic4
- HigResPic5
- HigResPic6
- HigResPic7
- HigResPic8
- HigResPic9
- HigResPic10
- Video1
- Video2
- ISO 9001 Certification
- Business Certificate
- Shipping Time Map