

High Intensity Colored LED Light Emitter - 12, 3-Watt LEDs - 9-32VDC - IP68 - 2736 Lumens

Part #: LEDP3W-12X2C



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The LEDP3W-12X2C LED Light Bar offers high output colored light from a compact form factor and is ideal for a wide range of uses including heavy equipment, hunting, boating, vehicle, military, law enforcement and industrial manufacturing applications. A 2,736 lumen output, very low amp draw, 50,000 hour service life and 9 to 32 volt compatibility provides operators with a compact and powerful LED lighting solution. Available color options include Red, Green, Blue, and Amber.

The LEDP3W-12X2C LED light bar from Magnalight produces 2,736 lumens of bright colored light while drawing only 36 watts @3 amps from a 12 volt electrical system. Twelve CREE XLamp XR-E® three watt LEDs producing 228 lumens each are arranged in rows and paired with high purity optics to produce a tightly focused 10 degree spot beam with little spread or spillage. We also offer optional floodlight versions with a 40 degree beam spread to provide more colored light over a larger area nearer the fixture, making flood versions ideal for use as work and area lights. These LED light bars 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 system makes these colored LED light emitters a superior lighting solution for a wide array of applications including but not limited to: military, industrial manufacturing, machine visioning, security and law enforcement, boating, vehicles and commercial structure illumination.

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 LEDP3W 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.

Durability: As well as unparalleled heat control, the LEDP3W series of LED light bars from Magnalight 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 XR-E® LEDs offer resistance to shocks and vibrations and are rated at 70% lumen maintenance after 50,000 hours of use. We recommend these LED lights for high humidity climates, very cold areas and rough saltwater conditions. They are also applicable to environments where equipment is used in one temperature extreme and stored in another temperature extreme.

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 Magnalight 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 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.

**LEDP3W-12X2C 40° Flood Beam
(Opt)**

**LEDP3W-12X2C 10° Spot Beam
(Std)**



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

Specifications / Additional Information**LEDP3W-12X2C LED Light Bar****Lamp Type:** CREE XLamp XR-E® LED**Dimensions:** 8 "-L 4"-H 3.5"-D**Watts:** 36**Led Drive %:** 90%**Voltage:** 9-32 VDC**Lighting Configuration:** 10° Spot or 40° Flood**Mounting:** Flat Surface or Tube - Adjustable**Wiring:** Deutsch IPD / LADD DT04-2P connector**Amps:** 3 (on 12 volts)**Lumens:** 2736**LED Light Color:** Blue, Red, Green, Amber**LED Life Expectancy:** 50,000 hours**Optics Efficiency:** 90%**Materials:** Aluminum Housing, Polycarbonate Lens**Housing Colors:** Black or White**Beam Colors:** Red - Blue - Green - Amber**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- Requirements

Contact us for special requirements

Toll Free: 1-800-369-6671**Intl:** 1-903-498-3364**E-mail:** sales@magnalight.com

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' Magnalight 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 Magnalight will provide a return label via email to the customer. When the failed light is returned, Magnalight will ship a new replacement.

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