

**High Intensity LED Boat Light - 12, 10-Watt LEDs - 10320 Lumen - Extreme Environment**

Part #: LEDPB10W-120X2E

**Buy American Compliant**

The LEDPB10W-120X2E LED Boat Light is IP68 rated waterproof to three meters, features a thick aluminum housing, stainless steel mounting hardware and an impact resistant polycarbonate lens, making it ideal for marine applications where corrosion resistance and durability are critical. 10,320 lumens of light output with low wattage and amp draw, 50,000 hour service life and 9 to 46 volt compatibility provides boat operators with a versatile and powerful LED lighting solution that outperforms halogen marine lamps while using far less power.

The LEDPB10W-120X2E LED light bar from Magnalight produces 10,320 lumens of bright light while drawing only 120 watts @10 amps from a 12 volt electrical system. Twelve CREE XLamp MC-E® ten watt LEDs producing 860 lumens each are arranged in two rows and paired with high purity optics to produce a 20 degree spread spot beam approximately 875' long by 100' 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 spreader 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 demanding conditions found in marine environments. Click here to see the benefits of using LED Boat Lights compared to HID lights on your boat.

An integral Pulse Width Modulation controller, high output, low power requirements, high durability and versatile mounting options makes these LED light emitters a superior lighting solution for boats and marine applications where versatility, extreme durability and efficiency is needed.



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

[Click Photo to Enlarge](#)



This photo shows the LEDPB10W-120X2E. In flood configuration, the light passes the 'Larson Electronics' Sign more than 750 feet away, yet still provides a large width for work area illumination.

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This image shows a close up picture of the 'Larson' sign, notice that the beam output still reaches farther than the sign positioned 750 feet away from the unit.

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**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 PWM drivers in these units provide boaters with an extremely versatile lighting option. The pulse width modulation drivers provide 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. This ability makes these LED fixtures capable of acting as beacons and signal lights as well as all around lighting fixtures.

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 a watercraft’s electrical systems which would otherwise result in burning up or premature LED failure without it.



[Click Photo to Enlarge](#)



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**Durability:** As well as unparalleled heat control, the LEDP10W 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 MC-E® LEDs offer resistance to shocks and vibrations and are rated at 70% lumen maintenance after 50,000 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 stainless steel 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 like railings and canopy frames and allows for minimal 7 degrees of flexibility of angle placement of the light.

In this LED emitter light bar model, an additional mounting option is provided. The adjustable, shock insulated mounts are attached to a simple, inverted u-bracket type mount. The LED light bar can then be mounted via a single 3/8 bolt through the center of the bracket. For even greater mounting versatility, check out the BC-2 bar clamp mounting system for LED Boat Lights.

**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, 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. Looking for more light output? [Click here](#) to see the full range of LED Boat Lights offered by Magnalight.

**LEDPB10W-120X2E 40° Flood Beam  
(Opt)**

**LEDPB10W-120X2E 20° Spot Beam  
(Stnd)**



**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****LEDPB10W-120X2E LED Light Bar****Lamp Type:** CREE XLamp MC-E® LED**Dimensions:** 11.9"-L 4"-H 3.5"-D**Watts:** 120**Led Drive %:** 90%**Voltage:** 9-46 VDC**Spot Beam:** 875'L x 100'W**Flood Beam:** 250'L x 225'W**Lighting Configuration:** 20° Spot or 40° Flood**Mounting:** Flat Surface or Tube - Adjustable**Wiring:** Deutsch IPD / LADD DT04-2P connector**Amps:** 10 (on 12 volts) 5 amps (on 24 volts)**Lumens:** 10,320**LED Light Color:** 6000K**LED Life Expectancy:** 50,000 hours**Optics Efficiency:** 90%**Materials:** Aluminum Housing, Polycarbonate Lens**Housing Colors:** Black or White**Flood Beam:** Lux @1 meter= 24,000 @3 meters= 3,850**Internal LED Driver Features**

Fast average current control

Programmable off-time switching

Linear dimming input

PWM dimming input

Short protection w/Skip mode

IP68 Rated\*

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:** 1-903-498-3363**E-mail:** sales@magnalight.com

**Spot Beam:** Lux @1 meter= 31,500 @3 meters= 6,550

**CE Certified**

\*Click here to learn about IP ratings and how it applies to your LED Boat Lights.

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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