



LUX-RC L30

240 Lumens Miniature Light

Introduction

LUX-RC L30 is a very high luminous flux light unit in a miniature full-metal case. It combines high efficiency of a power LED with very long operation life and good moisture, dust and shock protection. L30 is one of the most bright light sources on the market which weights just 12 grams and is less than 1 inch (25mm) in diameter.

L30 features a built-in power control and overheating protection. It operates in a full automatic mode. Internal switching regulator drives the LED with constant current in wide range of DC voltages (3.8 - 12V). L30 is connected directly to most cells/batteries and low-voltage DC supplies. Regardless the voltage operating at, the adaptive power technology keeps the luminous flux accurately stabilized. Low voltage cut-off function protects your battery from being over-discharged (the cut-off threshold is set to 3.8V).

Built-in current regulator operates at high switching frequency (1.6 MHz) combining very good power conversion efficiency with very low EM radiation and weight. It's safe for all types of radio controlled models and UAVs which now can take advantage of having a very lightweight and energy efficient on-board power headlight.

High-flux LEDs are known to emit a lot of heat. L30 comes with integrated overheating prevention circuit which guarantees safety and long life when operating in heavy duty conditions. Original alloy body with cooler fins efficiently takes excessive heat off the LED. LUX-RC Labs also offers a high-performance cooler option which targets the overheating when it becomes a problem.

L30 is highly adjustable for your particular needs. At your request, LUX-RC Labs can produce a series with specific light pattern, color and luminous flux/power characteristics. Optional lenses, mount kits, coolers and repair parts can be ordered separately from the lab.

Specifications

Luminous Flux (@ 4.5 watts)	240 Lumens
Operating DC Voltage Range	3.8 – 12 V
Consumed Power	4.5W (see Application Notes)
Beam angle	10° (see Options)
Dominant Wavelength	6300K (Cool White)
Cut-off Temperature	70 °C (158 °F)
Dimensions & Weight	25 x 25 x 18 mm (1" x 1" x 0.7") / 12 grams (0.42 oz)

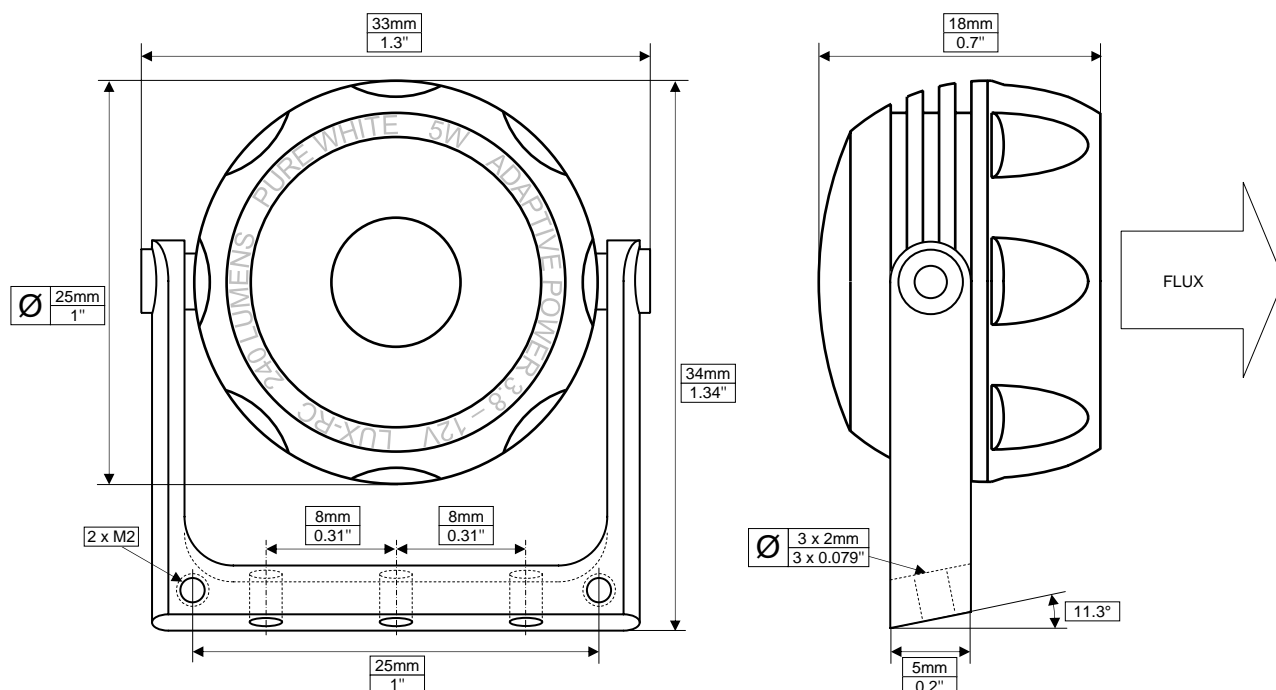
Features

- 240 lumens flux
- Just 12 grams
- Flux stabilized fully automatic operation in wide range of DC voltages (3.8 – 12V)
- More energy efficient than incandescent and most halogen lamps
- Very long operating life
- Built-in overheating protection circuit
- Low voltage cut-off function which protects the battery from over-discharging
- Robust shock-resistant design for extreme applications
- "Angel Eye" glow-in-the-dark effect
- Optional lenses with different beam angles
- Many options available

Typical applications

- High performance R/C models, scale models
- Unmanned aerial vehicles, FPV applications, robotics
- Portable lighting (flashlight, bicycle, anti-fog, tactic)
- Aquarium lighting
- Decorative and interior lighting

Design



L30 is an innovative product which brings together the most recent technologies of all over the world. It consists of 23 separate parts closely packed into a very compact case

Collimator Lens

The optical design of the collimator uses the total internal reflection mechanism to collimate the light into a 10° beam. Different beam angles are also available

Fluorescent Silicon O-ring

Provides a superior moisture and dust protection. The ring glows when the light is off producing an astonishing "angel eye" effect in the dark

Power LED

A top grade 240 Lumens 3.8W single-crystal LED. Different colors and power options are also available

A6061 Alloy Body

Full-metal body guarantees superior durability and excellent EMR protection

Cooler Fins

Alloy body serves as a cooler, efficiently taking excessive heat off the LED. For heavy-duty conditions and long-term operation an extra cooler option is recommended.

M2 Mount Collar

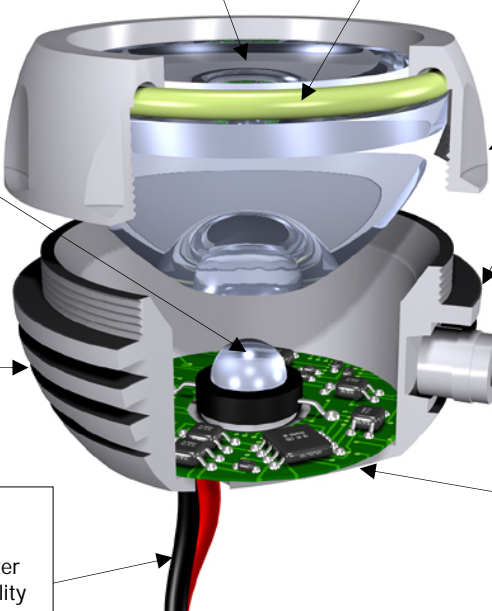
Replaceable mount collar for reliable fastening

Built-in Power Control

Adaptive power technology eliminates the need of any kind of external LED driver or resistor. The light unit can be connected directly to most batteries and DC supplies. It also protects the LED from over-heating and the battery from over-discharging.

Silicon Wire

In contrast to PVC, silicon coating provides much better thermal stability and flexibility



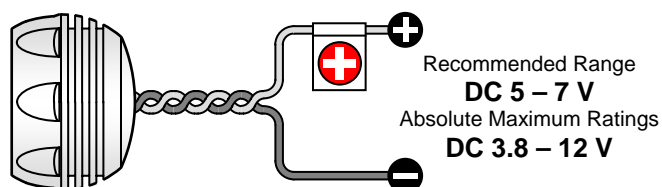
Application Notes



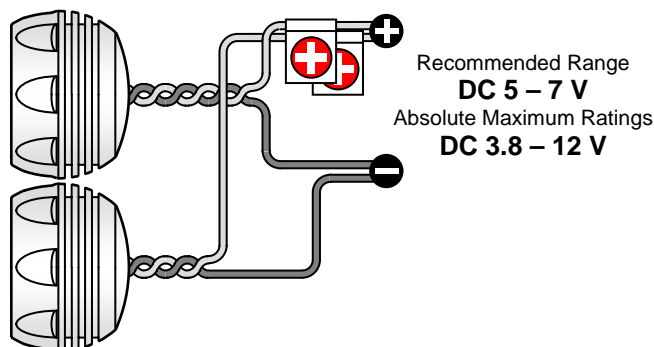
WARNING! DAMAGE RISK!

Carefully check the polarity and supply voltage before switching on! Reverse connection as well as over-voltage leads to damage we're NOT responsible for.

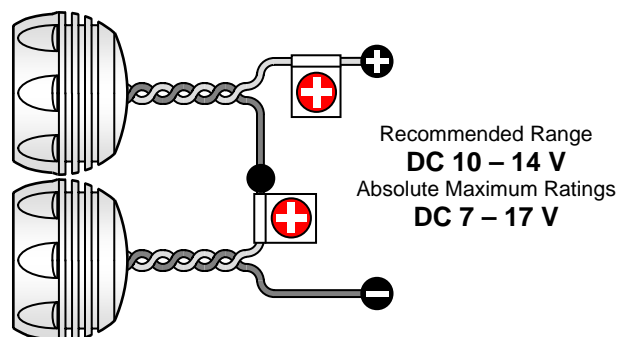
1. Connecting a Single Light to a DC Supply



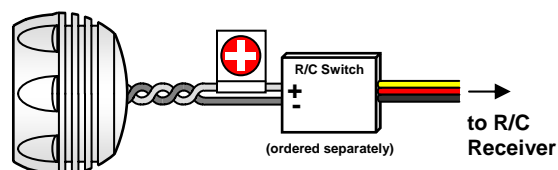
2. Parallel Connection (2 lights an up)



3. Recommended Serial Connection

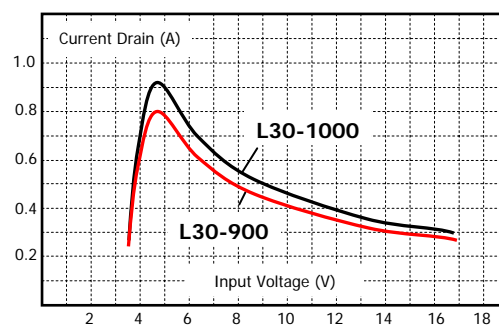


4. Connecting to a R/C Switch for Remote Control

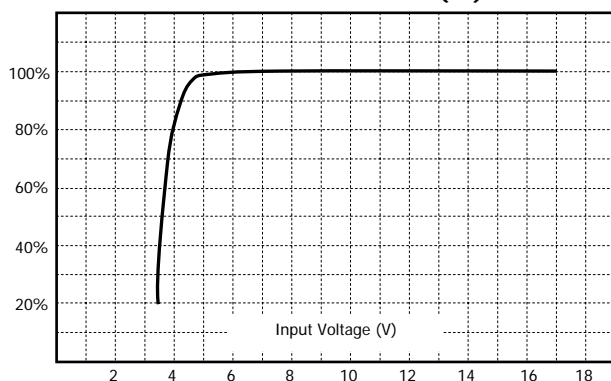


Current Drain Ratings

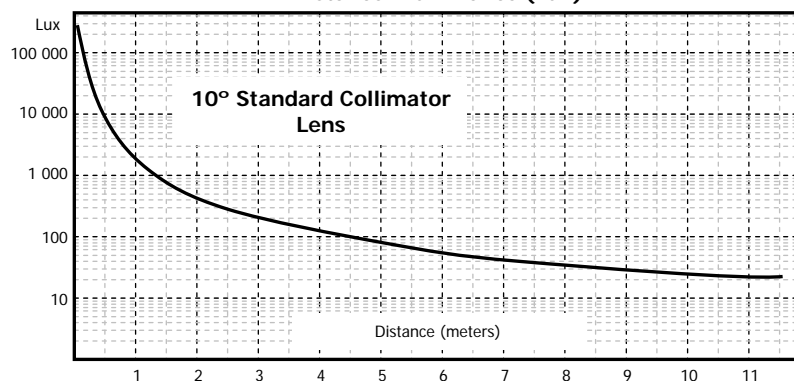
Modification	Input Voltage:	12.21 V (LiPo 3S)	8.13 V (LiPo 2S)	4.06 V (LiPo 1S)
L30-1000 (1 A)	Current drain	370 mA	550 mA	480 mA
	Effective power	4.52 W	4.47 W	1.95 W
L30-900 (900 mA)	Current drain	340 mA	490 mA	450 mA
	Effective power	4.15 W	3.98 W	1.83 W



Relative Luminous Flux (%)



Distance Illuminance (Lux)





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