PRODUCT DATA SHEET

LB300 Series | LINEAR LIGHT | Connect-a-light

product introduction

The LB300 array utilizes 12 high intensity LEDs being the longest light in the Connect-a-light Series. It also features an integrated constant current driver built into the light. It eliminates the need for any external components in the lighting system. The LB300 features a backlight lens and is a viable option for silhouetting objects. Connect-a-light Series Linear Lights utilize 24VDC and can operate in continuous or strobe mode. NPN or PNP strobe triggers can be used to control the pulse of the light. Intensity of the light can be controlled via 0-10V remote analog signal or manual potentiometer.

product features

- 5 Pin M12 Quick Disconnect
- Option of connecting lights together
- Backlight version of L300
- PNP and NPN Strobe input
- Continuous operation or Strobe mode
- Dimmable via built in potentiometer
- Analog intensity 0-10VDC signal
- Twelve, 1mm² Die High Current LEDs

product specifications

Electrical Input	24 VDC +/- 5%
Current	Max. 700mA
Wattage	Max. 17W
Strobe Input	PNP ► +3VDC or greater to activate. | NPN ► GND (<1VDC) to activate
PNP Line	3.7mA @ 3VDC | 6.2mA @ 5VDC | 12.6mA @ 10VDC | 30.4mA @ 24 VDC
NPN Line	22mA @ Common (0VDC)
Yellow Indicator LED	LED Strobe Indicator ON = Light Active
Green Indicator LED	ON = Power
Continuous Mode	Light will be in continuous mode by leaving signal on strobe input active
Potentiometer	3/4 turn pot – Intensity control of 10% to 100% Clockwise increases intensity
Analog Intensity	The output is adjustable from 10 -100% of brightness by a 0 -10 VDC signal
Connection	5 pin M12 connector
Daisy Chain	Up to six LB300
Lifespan	100,000 hrs
Ambient Temp.	-20º - 50º C (-4º - 122º F)
IP Rating	IP50
Weight	~370g
Compliances	CE and RoHS
IEC 62471 Rating	See page 4

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product number key

LB300 – XXX —» Part Number Key

Product Family:
Linear Backlight
LB300

Color:
470 – Blue
505 – Cyan
530 – Green
625 – Red
850/940 – IR
WHI - White

CE and RoHS Compliant

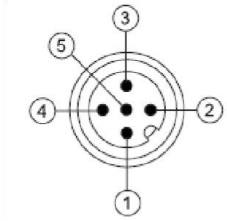
warnings

Attention

Please note that the power requirements are 700mA at 24VDC. Failure to supply light with 700mA will result in non-repeatable lighting. Contact Smart Vision Lights for more information.

wiring configuration

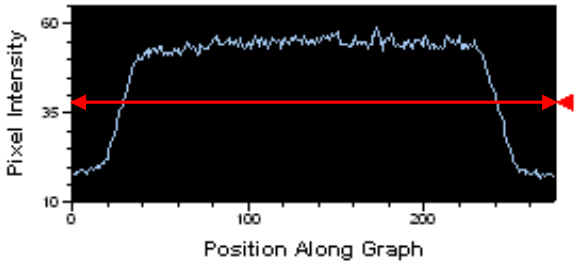
If Analog 0-10 VDC is not used to control light intensity;
+VDC (24VDC) must be connected to Analog Input - Jumper pin 5 to pin 1



Pin	Function	Signal	Wire Color
1	Power In	+24VDC	BROWN
2	NPN	Sinking Signal	**WHITE**
3	GND	Ground	**BLUE**
4	PNP	Sourcing Signal	**BLACK**
5	Intensity Control	0-10VDC	**GREY** [1]

[1] Some cables use green with yellow stripe for 0-10V adjustment

optical performance



The LB300 offers a very diffuse light pattern at a defined working distance between 150mm – 450mm. The Pixel Graph representation shows a steep drop off in intensity outside of the active area with a very diffuse light pattern inside.

Average Intensity Rating	36,000 lux*

*Lux measurement taken at surface of LB300.

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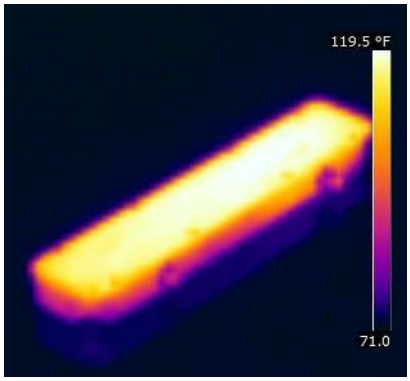
thermal analysis

In constant operation the housing on LB300 series lights will run at 50 Cº in an ambient temperature of 25 Cº.



LB300 series aluminum backplates designed to transfer heat away from high power LED's.

Additional heat sinking recommended in ambient air temperatures above 25˚C.

Thermal image taken after 2 hours of continuous ON operation at 25˚C.

mounting & accessories

Power Cables
5m, 10m, 15m

3-Axis Pan and Tilt Mount
PB300-M5

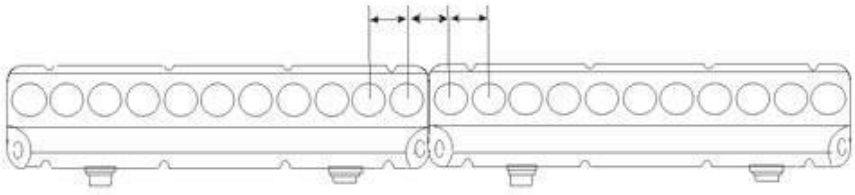
T-mount Rail Mount

connecting lights/daisy chain

LB300 Series light requires the use of a standard 5-pin M12 jumper cable effectively paralleling up to six LB300 lights.

LED spacing & illumination

Constant spacing between LED's as lights are connected together



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risk group

According to IEC 62471:2006. Full documentation upon request.

Notice

Exempt Group: No photobiological hazard to eyes or skin even for continuous, unrestricted use.
Applicable for wavelengths: 625, 850, and 940.

Caution

Risk Group 1: Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to eye. Safe for most applications except prolonged exposures.
Applicable for wavelengths: 395, 470, 505, 530, and WHI.

Notice

Risk Group 1: UV emitted from this product. Minimize exposure to eyes and skin. Use appropriate shielding. Safe for most applications except prolonged exposures.
Applicable for wavelengths: 395

Caution

Risk Group 2: UV emitted from this product. Eye or skin irritation may result from exposure. Use appropriate shielding. Does not pose optical hazard if aversion responses limit exposure.
Applicable for wavelengths: 365

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