



## product introduction

The plug n' play design of the Direct-Connect Linear Light Series gives users tremendous flexibility without the concern for additional wiring. The LXB150 array utilizes 6 high intensity LEDs with a backlit acrylic lens. It also features an integrated constant current driver built into the light. It eliminates the need for any external components in the lighting system. Direct-Connect 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. Available in multiple wavelengths.



## product features



- Backlight or Diffuse Front Light
- Direct Connect – No Need For Additional Cables
- T-Slot For Mounting And Connecting Together
- Driver Built In – No External Wiring To A Driver
- PNP and NPN Strobe Input
- Continuous Operation or Strobe Mode
- Dimmable via Built In Potentiometer
- Analog Intensity 0-10VDC Signal
- Six, 1mm<sup>2</sup> Die High Current LEDs



## product specifications

<b>Electrical Input</b>	24VDC +/- 5%
<b>Current</b>	Max. 350mA
<b>Wattage</b>	Max. 8.4W
<b>Strobe Input</b>	PNP ▶ +3VDC or greater to activate.   NPN ▶ GND (<1VDC) to activate
<b>PNP Line</b>	3.7mA @ 3VDC   6.2mA @ 5VDC   12.6mA @ 10VDC   30.4mA @ 24VDC
<b>NPN Line</b>	22mA @ Common (0VDC)
<b>Yellow Indicator LED</b>	LED Strobe Indicator ON = Light Active
<b>Green Indicator LED</b>	ON = Power
<b>Continuous Mode</b>	Light will be in continuous mode by leaving signal on strobe input active
<b>Potentiometer</b>	10 turn pot – Intensity control of 10% - 100% Clockwise increases intensity
<b>Analog Intensity</b>	The output is adjustable from 10%-100% of brightness by a 0-10VDC signal
<b>Connection</b>	5 pin M12 Integral QD connector
<b>Daisy Chain</b>	Up to sixteen LXB150
<b>Ambient Temperature</b>	-20° - 50° C (-4° - 122° F)
<b>Lifespan</b>	100,000 hrs
<b>IP Rating</b>	IP50
<b>Weight</b>	~285g
<b>IEC 62471 Rating</b>	See page 4



## product key number

# LXB150 – XXX –» Part Number Key

Product Family:  
Linear Light  
LXB150

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 350mA at 24VDC. Failure to supply light with 350mA will result in non-repeatable lighting. Contact Smart Vision Lights for more information.



## wiring configuration



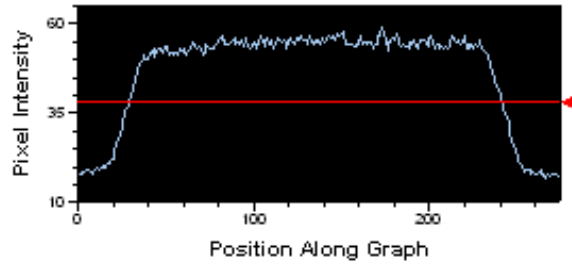
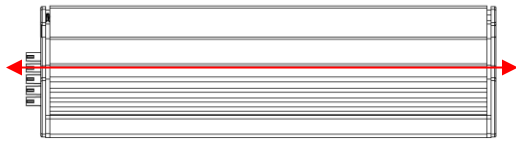
If Analog 0-10VDC is not used to control light intensity;  
+VDC (24VDC) must be connected to Analog Input - Jumper pin 3 to pin 1

PIN	Wire Color	Function	Signal
5	BLUE	Ground	GND
4	BLACK	PNP Strobe	4VDC to 30VDC for active ON
3	GREY	Analog Intensity Control	0-10VDC
2	WHITE	NPN Strobe	GND for active ON
1	BROWN	Power	+24VDC

† Some cables use green with yellow stripe for 0-10V adjustment



## optical performance



The LXB150 offers a very diffuse light pattern at any defined working distance. The Pixel Graph representation shows a steep drop off in intensity outside of the active area with a very diffuse light pattern inside.



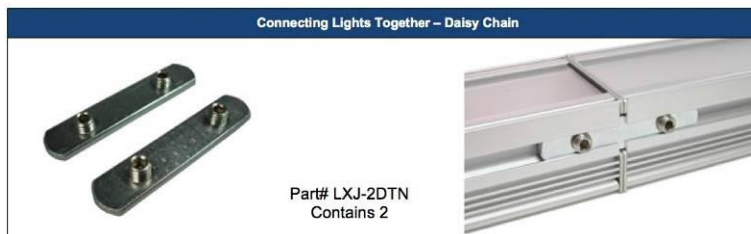
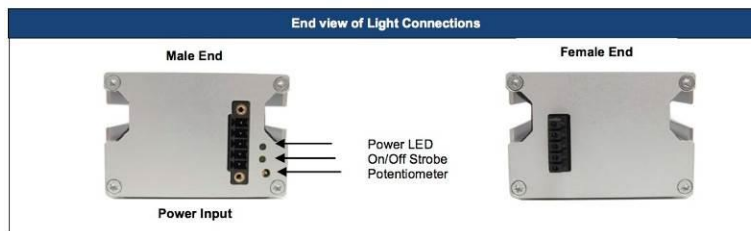
## thermal analysis

The LX series of linear lights is the brightest in the vision industry due to the heat dissipation of the housing. Lifespan and power output for LED lights are based on the junction temperature of the high current LED. The junction is the point where the light is generated inside the LED and the point of heat generation. To dissipate heat, Smart Vision Lights directly mounts high current LED's to an aluminum circuit board. The aluminum circuit board is in direct contact with LX series aluminum housing. This design efficiently transfers heat away from the high powered LEDs. Therefore, the LX series Linear Light can be run at higher current, producing an increased output due the even heat dissipation of the aluminum housing. In constant operation the housing on Smart Vision Lights LX series lights will run at 50°C in an ambient temperature of 25°C.





## connecting lights / daisy chain



## 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 and 850.

### 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