



smart  
vision lights

# LXB300 *Direct Connect* LINEAR LIGHT

P R O D U C T D A T A S H E E T



Warranty  
**10**  
YEAR

Compliant  
**IEC**  
62471

Compliant  
**CE**  
RoHS

Rated  
**IP**  
50

Connector  
**5-PIN**  
M12

## PRODUCT HIGHLIGHTS

- ✓ Built-in driver, no external wiring needed
- ✓ PNP and NPN strobe input
- ✓ T-Slot for mounting and connecting together
- ✓ Direct connect up to 6 units





## PRODUCT DESCRIPTION

The modular design of the LXB300 linear light, part of the Direct Connect Linear Light Series, offers integrated light-to-light connectors, eliminating the need for cable connectors to string lights together. The LXB300 features a factory installed 2447 diffuser backlight lens and is a viable option for silhouetting objects. The light operates in continuous operation. This innovative design requires power connection to the first light but eliminates the need for jumper cables to pass power through to the next, enabling tailored-length solutions in increments of 300 mm. Direct connect up to six LXB300 together. Compatible with the LXB150.

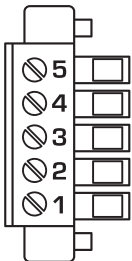


## PRODUCT SPECIFICATIONS

Electrical Input	24VDC +/- 5%
Input Current	Max. 700 mA
Wattage	Max. 17 W
On / Off Input	PNP > +4VDC or greater to activate   NPN > GND (<1VDC) to activate
PNP Line	4 mA @ 4VDC   10 mA @ 12VDC   20 mA @ 24VDC
NPN Line	15 mA @ Ground (0VDC)
Yellow Indicator LED	LED Strobe Indicator ON = Light Active
Green Indicator LED	ON = Power
Continuous Mode	NPN can be tied to ground <b>OR</b> PNP can be tied to 24VDC (not both).
Potentiometer	Multi-turn pot – Intensity control of 10% to 100%. Turn clockwise to increases intensity.
Analog Intensity	The output is adjustable from 10%–100% of brightness by a 1–10VDC signal. (Jumpering pin 3 to pin 1 will provide maximum intensity).
Connection	5-pin terminal connector
Ambient Temperature	-18°–40° C (0°–104° F)
IP Rating	IP50
Weight	~540g
Compliances	CE, RoHS, IEC 62471



## WIRING CONFIGURATION



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

For maximum intensity, it is possible to tie pin 3 to pin 1 at +24VDC.

For continuous mode: PNP (pin 4) can be tied to +24VDC (pin 1) **or** NPN (pin 2) can be tied to Ground (pin 5).

### OPTIONAL

For maximum intensity, it is possible to jumper pin 3 to pin 1\*

\*Intensity potentiometer must be set to maximum intensity

Pin layout for light (Male Connector)

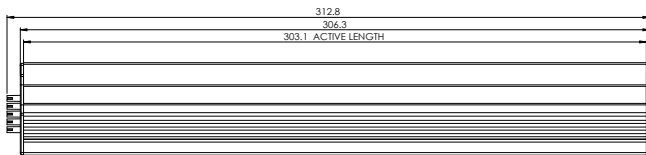
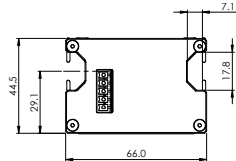
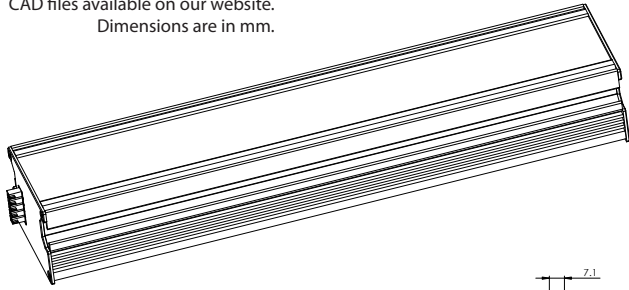


## RESOURCE CORNER

Additional resources are available on our website, including CAD files, videos, and application examples.

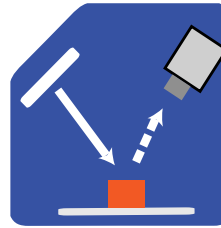
## PRODUCT DRAWING

CAD files available on our website.  
Dimensions are in mm.

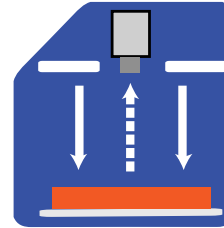


## ILLUMINATION

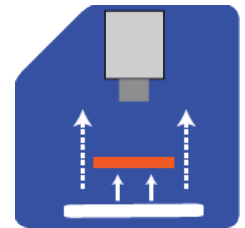
LXB150 Series of Linear Lights works best for:



Bright Field



Direct Lighting



Backlight

## EYE SAFETY

According to IEC-62471:2006. Full documentation available 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 eyes. Safe for most applications except prolonged exposure. Applicable for wavelengths: 470, 505, 530, and WHI.



## PART NUMBER

LXB300 —    —

COLOR:



CONNECTION:

Leave blank for Direct Connect.

NDC = No Direct Connect

### Part Number Examples:

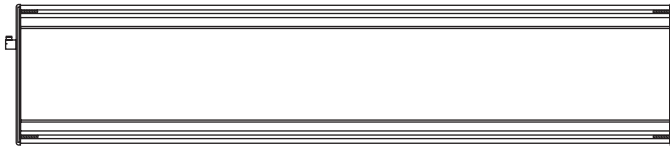
LXB300-625 LXB300, 625 nm Red Wavelength

Additional wavelengths and lens options available upon request  
Light comes with female terminal block - part number CON0022



## OPTICAL PERFORMANCE

Smart Vision Lights recommends the LXB300 be used at a working distance between 150 mm to 450 mm.



### OPTICAL PERFORMANCE FOR THE LXB300

Rating	Illumination (Lux)
Average Intensity Rating	69,000
<i>Lux measurement taken at surface of LXB300</i>	



## ACCESSORIES

Connector (Only for Direct Connect)	
Description	Part Number
Set of 2 Connectors	LXJ-2DTN

Terminal Block Plugs	
Description	Part Number
Male and female terminal block connectors	LX-2CON-KIT

Power Connector	
Length	Part Number
300 mm	5PM12-LXP

Jumper Cables*	
Lengths	Part Number
300 mm	5PM12-J300
1000 mm	5PM12-J1000
2000 mm	5PM12-J2000

\* Only used when connecting to 5PM12-LXP



## GLOSSARY

This glossary covers all Smart Vision Lights product families; some content in this section may not apply to this specific light.

### TERMINOLOGY

**OverDrive™** Lights include an integrated high-pulse driver for complete LED light control.

**Continuous Operation** Lights stay on continuously.

**Multi-Drive™** Combines continuous operation and OverDrive™ strobe (high-pulse operation) mode into one easy-to-use light.

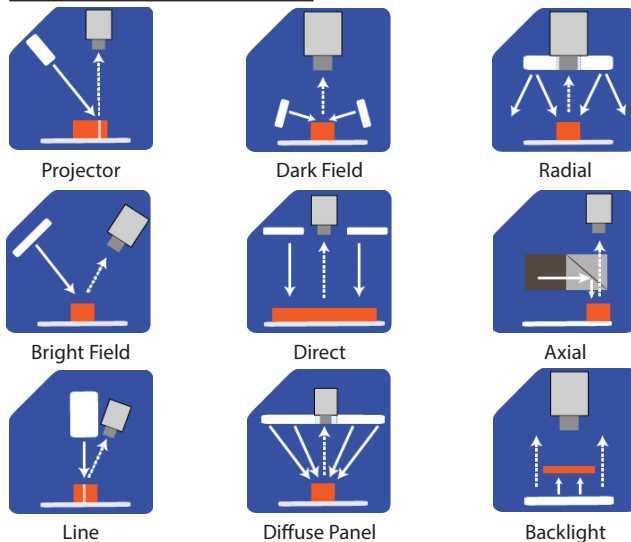
**Built-in Driver** The built-in driver allows full function without the need of an external controller.

**Camera to Light** Connecting the light directly to the camera, without the need for additional controllers or equipment.

**Polarizers** Filters that reduce reflections on specular surfaces.

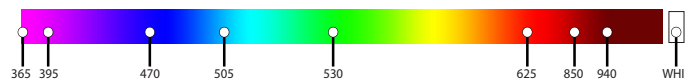
**Diffuser** Used to widen the angle of light emission, reduce reflections, and increase uniformity.

### TYPES OF ILLUMINATION



### COMMON COLOR/WAVELENGTHS LEGEND

Wavelengths options range from 365 nm to 1550 nm.\*  
Additional wavelengths available for many light families.



\*See Part Number section for **this light's** available standard wavelengths.



Shortwave Infrared LEDs are available in 1050 nm, 1200 nm, 1300 nm, 1450 nm, and 1550 nm.\*

\*Check Part Number section to see if **this light** is available in SWIR wavelengths.