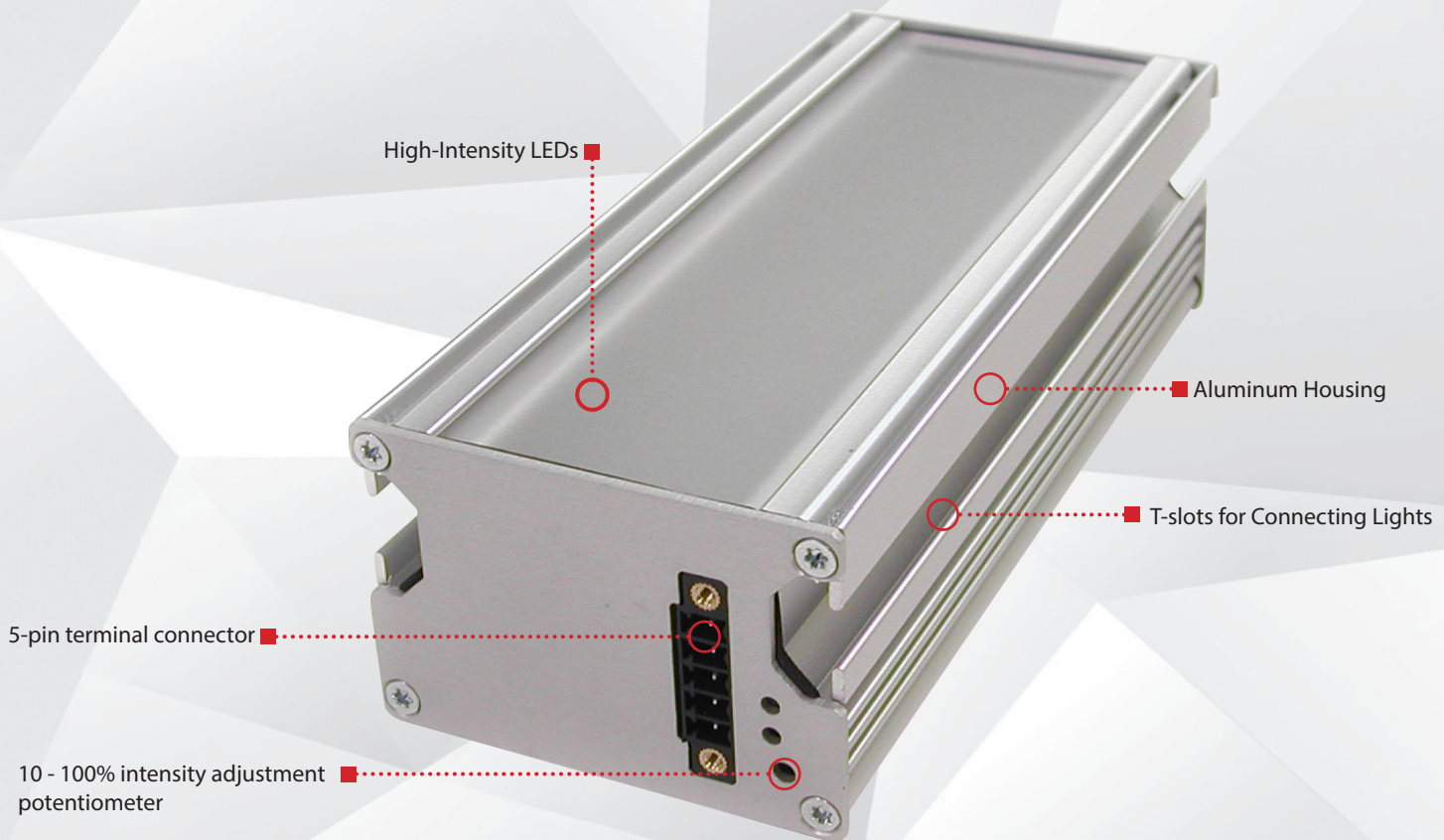


## P R O D U C T   D A T A   S H E E T



Warranty  
**10**  
YEAR

Compliant  
**IEC**  
62471

Compliant  
**CE**  
RoHS

Rated  
**IP**  
50

Terminal  
Connector  
**5-PIN**

## PRODUCT HIGHLIGHTS

- ✓ OverDrive™ — Up to five times brighter than a standard Direct Connect Linear Light
- ✓ Built-in driver
- ✓ PNP and NPN strobe input
- ✓ T-Slot for mounting and connecting together
- ✓ Direct connect up to 12 units





## PRODUCT DESCRIPTION

The modular design of the ODLX150 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 light operates in OverDrive™ strobe mode. 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 150 mm. Direct connect up to twelve ODLX150 together. Compatible with the ODLX300.

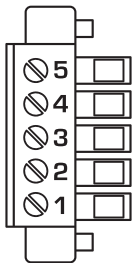


## PRODUCT SPECIFICATIONS

Electrical Input	24 V DC +/- 5%
Input Current	Max. 4 A
Wattage	Max. 96 W
On / Off Input	PNP > +4 VDC (24 VDC max.) to activate or NPN ≥ GND <1VDC to activate ( <b>not both</b> )
PNP Trigger	4 mA @ 4VDC   10 mA @ 12VDC   20 mA @ 24VDC
NPN Trigger	15 mA @ Ground (0VDC)
Yellow Indicator LED	LED Strobe Indicator ON = Light Active
Green Indicator LED	ON = Power
Continuous Mode	PNP > +4 VDC (24 VDC max.) to activate or NPN ≥ GND <1VDC to activate ( <b>not both</b> )
Potentiometer	270° turn pot – Intensity control of 10% to 100%. Turn clockwise to increase intensity.
Analog Intensity	The output is adjustable from 10%–100% of brightness by a 1–10VDC signal. (Jumping 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	~285g
Compliances	CE, RoHS, IEC 62471



## WIRING CONFIGURATION



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

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

### OPTIONAL

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

Pin layout for light (Male Connector)



## RESOURCE CORNER

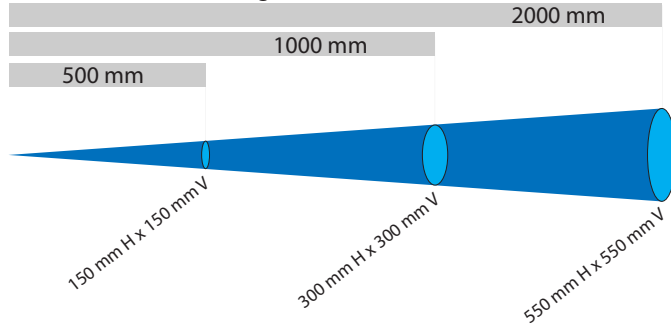
Additional resources are available on our website, including CAD files, videos, and application examples.



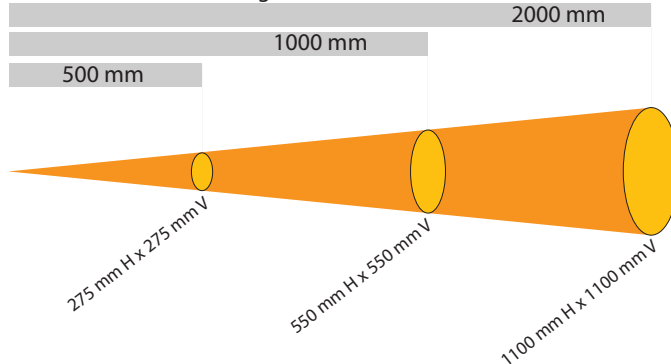
## LIGHT PATTERNS

Smart Vision Lights recommends the ODLX150 be used at a working distance between 300 mm to 4000 mm.

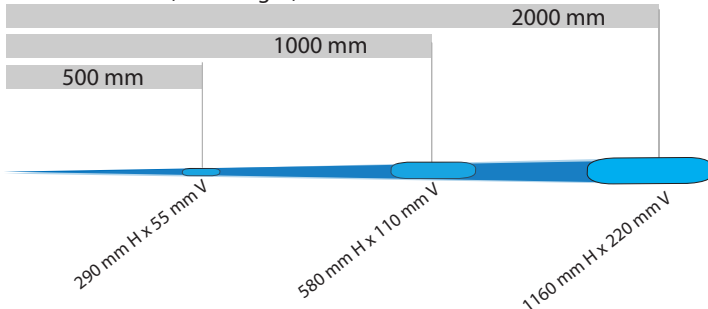
Beam Diameter (White Light) – 6500 K



Beam Diameter (White Light) – 6500 K



Beam Diameter (White Light) – 6500 K



### LIGHTING PATTERN FOR THE ODLX150 with Narrow (Standard) Lenses

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
500 mm (19.7")	150 mm (~5.9") H x 150 mm (~5.9") V
1000 mm (39.4")	300 mm (~11.8") H x 300 mm (~11.8") V
2000 mm (78.8")	550 mm (~21.6") H x 550 mm (~21.6") V

Typical Output Performance	Illuminance (Lux)
Distance = 500 mm	11,000
Illumination measurement taken on White Lights - 6500K	

### LIGHTING PATTERN FOR THE ODLX150 with Wide (W) Lenses

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
500 mm (19.7")	275 mm (~10.8") H x 275 mm (~10.8") V
1000 mm (39.4")	550 mm (~21.6") H x 550 mm (~21.6") V
2000 mm (78.8")	1100 mm (~43") H x 1100 mm (~43") V

Typical Output Performance	Illuminance (Lux)
Distance = 500 mm	8,000
Illumination measurement taken on White Lights - 6500K	

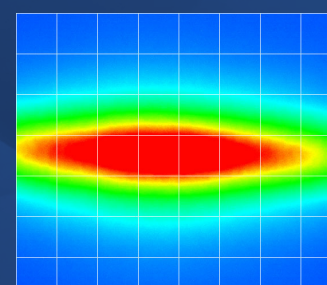
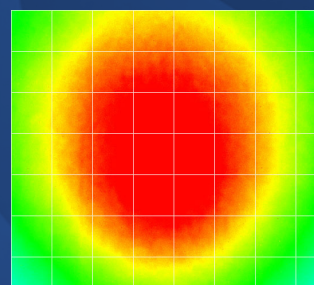
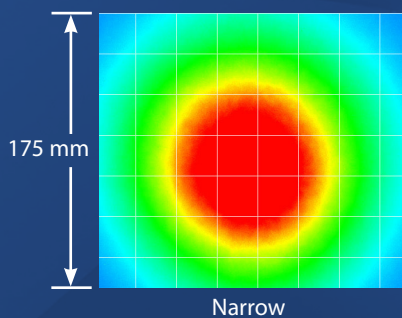
### LIGHTING PATTERN FOR THE ODLX150 with Line (L) Lenses

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
500 mm (19.7")	290 mm (~12.2") H x 55 mm (~2.1") V
1000 mm (39.4")	580 mm (~24.4") H x 110 mm (~4.3") V
2000 mm (78.8")	1160 mm (~48.8") H x 220 mm (~8.6") V

Typical Output Performance	Illuminance (Lux)
Distance = 500 mm	19,000
Illumination measurement taken on White Lights - 6500K	

**The ODLX150 Linear Light produces a uniform light pattern.**

Working Distance = 500 mm Grid set to 25 mm x 25 mm

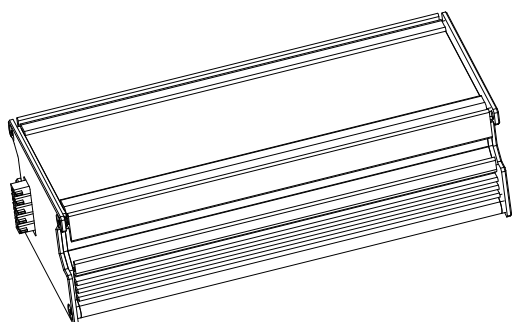
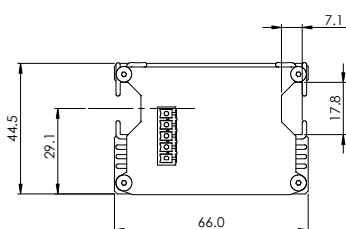
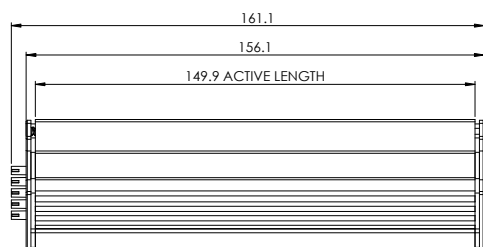






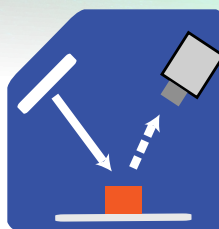
## PRODUCT DRAWING

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

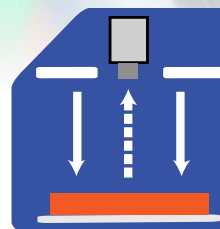


## ILLUMINATION

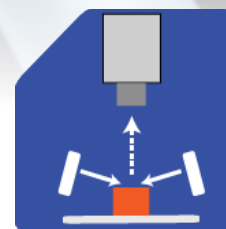
ODLX150 Series of Linear Lights works best for:



Bright Field



Direct Lighting



Dark Field



## 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: WHI, 470, 505, 530, 625, 850, and 940.

### 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 365 and 395



## PART NUMBER

**ODLX150** –



**COLOR:**



**LENS:**

Leave blank for standard (narrow)

W = Wide

L = Line



**LINEAR POLARIZER:**

Leave blank for none

LPI = Factory Installed

### Part Number Examples:

<b>ODLX150-625</b>	ODLX150, 625 nm Red Wavelength, Standard (Narrow) Lenses
<b>ODLX150-WHI-L</b>	ODLX150, White, Line Lenses
<b>ODLX150-470-W-LPI</b>	ODLX150, 470 nm Blue Wavelength, Wide Lenses, with Linear Polarizer installed

\* Line lens optic not available for UV wavelengths  
Additional wavelengths and lens options available upon request



## STANDARD LENS OPTICS

### NARROW

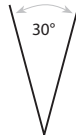
**Narrow lenses are standard.**

Narrow, 14° angle cone lenses are standard. Standard lenses project a narrow beam of illumination and are used for long working distances.



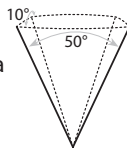
### WIDE

Wide, 30° angle cone lenses project a large area of illumination. They create a floodlight effect, can be used for short working distances.



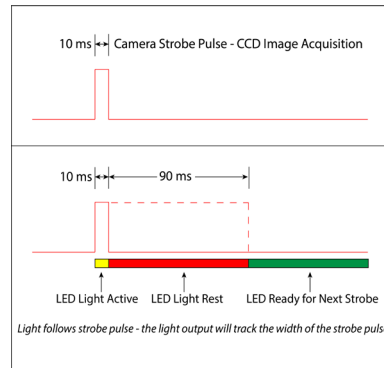
### LINE

Line, with a 10° width and a 50° fan angle projects a thin, narrow beam of illumination.



## DUTY CYCLE

The Duty Cycle (D) is related to the Strobe Time (ST) and Rest Time (RT).



Maximum Duty Cycle for OverDrive™ light is 10% (0.1)

Calculating Rest Time

$$RT = \frac{ST}{D} - ST$$

RT = Rest Time  
ST = Strobe Time  
D = Duty Cycle


Example


$$RT = \frac{10 \text{ ms}}{.1} - 10 \text{ ms} = 90 \text{ ms}$$


Rest Time is 90 ms for 10 ms Strobe Time




## ACCESSORIES

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

No Direct Connect End Cap	
	
Description	Part Number
No Direct Connect End Cap	PLT0146-CLR

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

Power Connector	
	
Length	Part Number
300 mm	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.

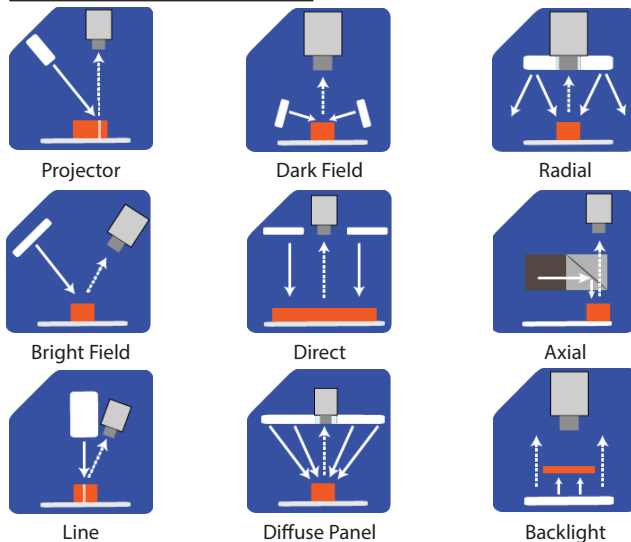
**Built-in Driver** The built-in driver allows full function without the need of an external controller.

**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.

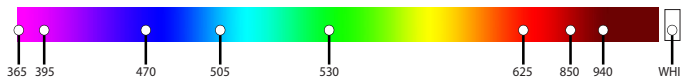
**Diffuser** Used to widen the angle of light emission, reduce reflections, and increase uniformity.

### 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.