PRODUCT DATA SHEET

ODLX150 | **LINEAR LIGHT** | OverDrive

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 ODLX150 array utilizes 6 high intensity LEDs being the longest light in the Direct-Connect 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. 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 standard tight, wide, and line optics with options for all standard and some custom wavelengths. The ODLX150 Series has an output intensity 4x to 5x the intensity of the standard LX150.

product features

- Direct Connect
- T-Slot For Mounting and Connecting Together
- Driver Built In – No External Wiring To A Driver
- PNP and NPN Strobe Input
- 4x to 5x Intensity Of Standard LX150
- Maximum 5000 Strobes Per Second
- Dimmable Via Built In Potentiometer
- Analog Intensity 0-10VDC Signal

product specifications

Electrical Input	24 VDC +/- 5%
Current	Max. 4A draw during strobe – Max Average 400mA
Wattage	Max. 96W draw during strobe - Avg. 9.6W
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
Potentiometer	10 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
Strobe/Pulse Time	Max. 5000 SPS (Strobes Per Second) | Max. Single Pulse = 125ms
Connection	5 pin M12 Integral QD connector
Daisy Chain	Up to twelve ODLX150
Ambient Temperature	-20º - 50º C (-4º - 122º F)
Lifespan	100,000 hrs
IP Rating	IP50
Weight	~285g
IEC 62471 Rating	See page 5

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product key number

ODLX150 – XXX- X* —» Part Number Key

Product Family:
Linear Light
ODLX150

Color:
365, 395 –UV
470 –Blue
505 – Cyan
530 – Green
625 – Red
850, 940 – IR
WHI - White

Lenses:
W - Wide
L - Line

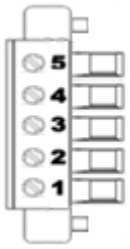
* Lights come standard with Narrow lenses

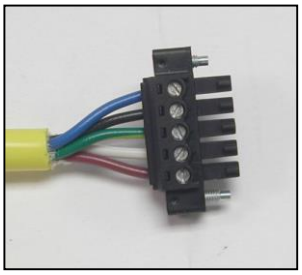
CE and RoHS Compliant

warnings

Attention
Please note that the power requirements are 4A at 24VDC. Failure to supply light with 4A 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 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	0-10 VDC
2	WHITE	NPN Strobe	GND for active ON
1	BROWN	Power	+24 VDC

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

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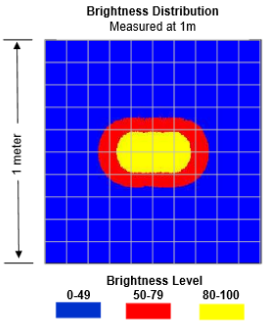
optical performance

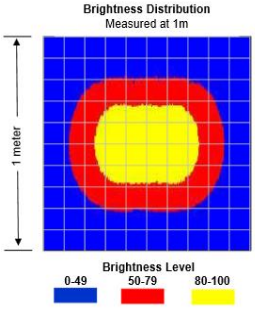
ODLX150-XXX

Working Distance mm (inches)	Pattern (80%-100% measured intensity) mm (Inches)
.5m (19.7")	130mm(~9") H x 100mm(~4") V
1m (39.4")	210mm(~10") H x 200mm(~8") V
1.5m (59")	280mm(~14") H x 280mm(~11") V
Typical output performance	Illumination (Lux)
Distance = .5 meter	45000
Illumination measurement taken on White Lights – 6500K	



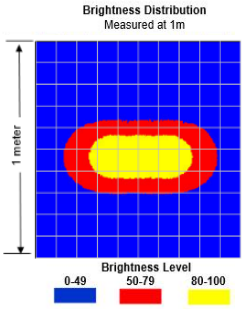
ODLX150-XXX-W

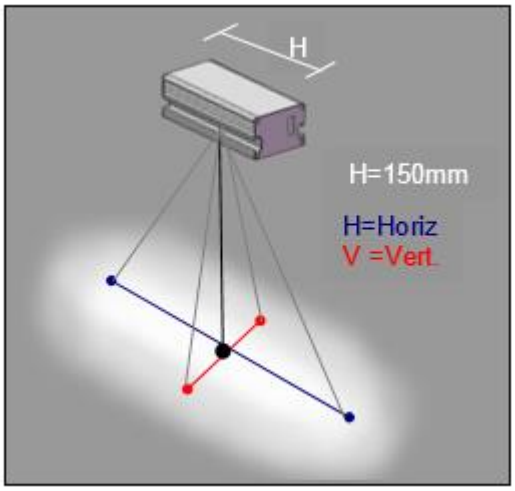
Working Distance mm (inches)	Pattern (80%-100% measured intensity) mm (Inches)
.5m (19.7")	180mm(~9") H x 180mm(~7") W
1m (39.4")	350mm(~16") H x 300mm(~14") W
1.5m (59")	650mm(~21") H x 650mm(~21") W
Typical output performance	Illumination (Lux)
Distance = .5 meter	31500
Illumination measurement taken on White Lights – 6500K	



ODLX150-XXX-L

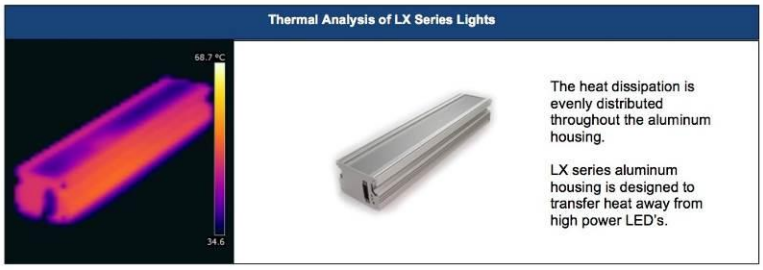
Working Distance mm (inches)	Pattern (80%-100% measured intensity) mm (Inches)
.5m (19.7")	200mm(~9") H x 100mm(~4") V
1m (39.4")	520mm(~20") H x 200mm(~8") V
1.5m (59")	710mm(~33") H x 280mm(13") V
Typical output performance	Illumination (Lux)
Distance = .5 meter	40000
Illumination measurement taken on White Lights – 6500K	



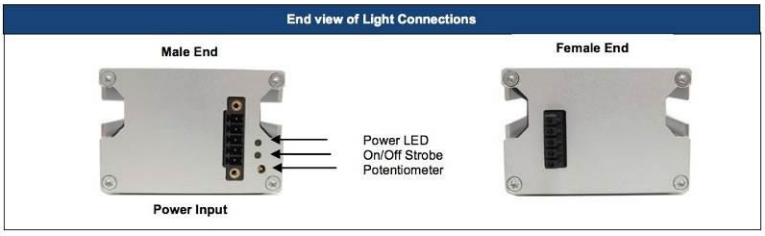


thermal analysis

The ODLX 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 ODLX series aluminum housing. This design efficiently transfers heat away from the high powered LEDs. Therefore, the ODLX 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 ODLX series lights will run at 50 C° in an ambient temperature of 25 C°.



connecting lights / daisy chain



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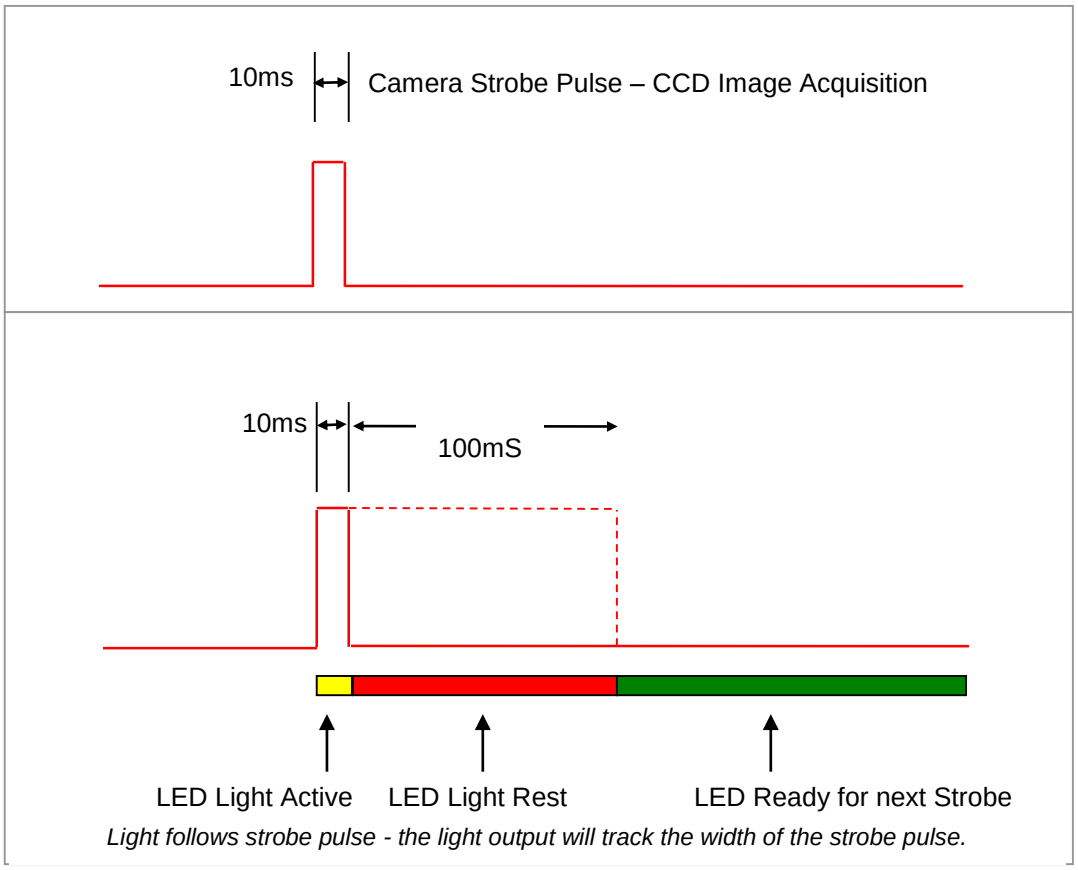
Duty Cycle on Performance of Light

All lights are pulse following



Light follows strobe pulse - the light output will track the width of the strobe pulse.

Duty Cycle (*D*) is defined as the ratio between Strobe Time and Rest Time

Maximum Duty Cycle for OD Light is 10% = .1

Calculating Rest Time - R_T

$$R_T = \frac{S_T}{D}$$

S_T is the Strobe Time
R_T is the Rest Time
D is Duty Cycle

Example: Camera exposure of 10mS where Strobe Time is 10mS.

$$R_T = \frac{10ms}{.1} = 100mS$$

Rest Time is 100ms for 10ms Strobe Time

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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

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