



## product introduction

The ODSXP30 Series Projector Light offers the most intense projected pattern from an LED. This light features an Overdrive driver with NPN or PNP signal options. The 9mm<sup>2</sup> die size emits 5-6x the intensity as a constant current SXP30. The housing is constructed of finned 6061-T6 aluminum designed to dissipate as much heat as possible therefore allowing the LED to be strobed at 15A during the active ON period in comparison to 2A in the standard SX30. Multiple interchangeable pattern styles are available along with optional custom patterns. The ODSXP30 Series is able to project a thinner and define pattern of light compared to laser projectors making the ODSXP30 a more accurate light.



## product features



- Multiple Interchangeable Patterns
- SafeStrobe Technology
- Driver Built In – No External Wiring To A Driver
- PNP and NPN Strobe Input
- Analog Intensity 0-10VDC Signal
- 15A Pulsed Through LED
- Up To 5000 Strokes Per Second
- 5-6x the Intensity as the SXP30
- Maximum Strobe Time 50mS



## product specifications

<b>Electrical Input</b>	24 VDC +/- 5%
<b>Current</b>	Max. 15A draw during strobe – Max. Average 1.5A
<b>Wattage</b>	Max. 360W draw during strobe – Max Average 36W
<b>Strobe Input</b>	PNP ► +4VDC or greater to activate.   NPN ► GND (<1VDC) to activate
<b>PNP Line</b>	4.7mA @ 4VDC   6.2mA @ 5VDC   12.6mA @ 10VDC   30.4mA @ 24 VDC
<b>NPN Line</b>	22mA @ Common (0VDC)
<b>Duty Cycle</b>	Max. 10%
<b>Strobe/Pulse Time</b>	Max. 5000 SPS (Strokes Per Second)   Max. Single Pulse = 50ms
<b>Red Indicator LED</b>	ON = LED ON (LED active) OFF = LED/Light Not Ready
<b>Green Indicator LED</b>	ON = Power
<b>Analog Intensity</b>	The output is adjustable from 10 -100% of brightness by a 0 -10 VDC signal
<b>Connection</b>	5 pin M12 connector
<b>Ambient Temp.</b>	-20° - 50° C (-4° - 122° F)
<b>IP Rating</b>	IP50
<b>Weight</b>	~413g
<b>Compliances</b>	CE and RoHS
<b>IEC 62471 Rating</b>	See page 6



## product number key

# ODSXP30 – XXX –» Part Number Key

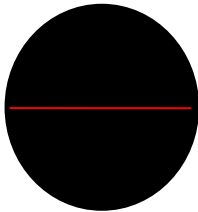
Product Family:  
Projector Light  
ODSXP30

Color:  
470 – Blue  
530 – Green  
625 – Red  
850 – IR  
WHI - White

CE and RoHS Compliant

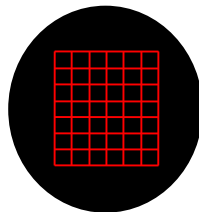
Standard patterns are available and custom patterns can be etched. Patterns can be changed.

Line



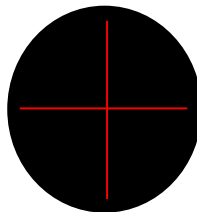
SP-PO-1LN

Grid



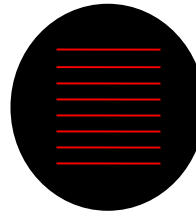
SP-PO-8x8GRID

Cross



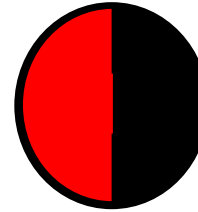
SP-PO-CH

Multiple Line



SP-PO-8LN

Half Sphere



SP-PO-HS



## warnings



### Attention

Please note that the power requirements are 15A at 24VDC. Failure to supply light with 15A 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 †

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



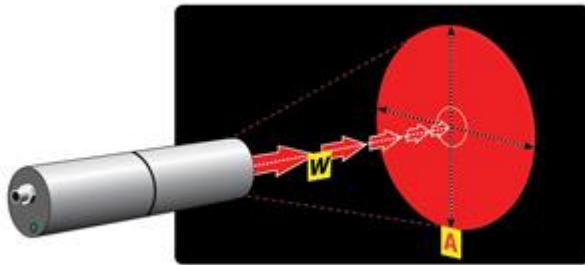
## optical performance

W = Working Distance

A = Diameter of Area

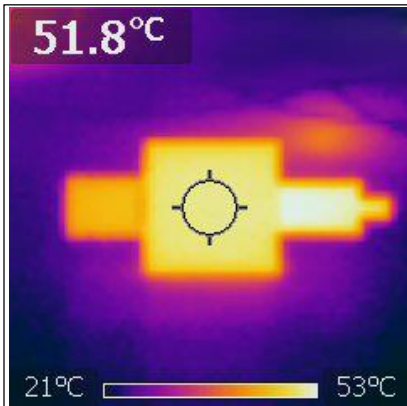
	100mm	150mm	200mm	300mm	400mm	500mm	600mm	750mm	1000mm	1500mm	2000mm
60mm			25			50					
100mm	8	12	16	25	35	35	50	50			
150mm	6	8	12	16	25	25	35	35	50	75	
200mm		6	8	12	16	16	25	25	35	50	100
300mm			6	8	12	12	16	16	25	35	50
400mm				6	8	8	12	12	16	25	35
500mm					6		8	12	16	25	25

Number in box represents the focal length of lens (example - 6 is a 6mm focal length lens)



## thermal analysis

In constant operation the housing on ODSXP30 series lights will run at 50 C° in an ambient temperature of 25 C°.



ODSXP30 series aluminum enclosures designed to transfer heat away from the high power LED.

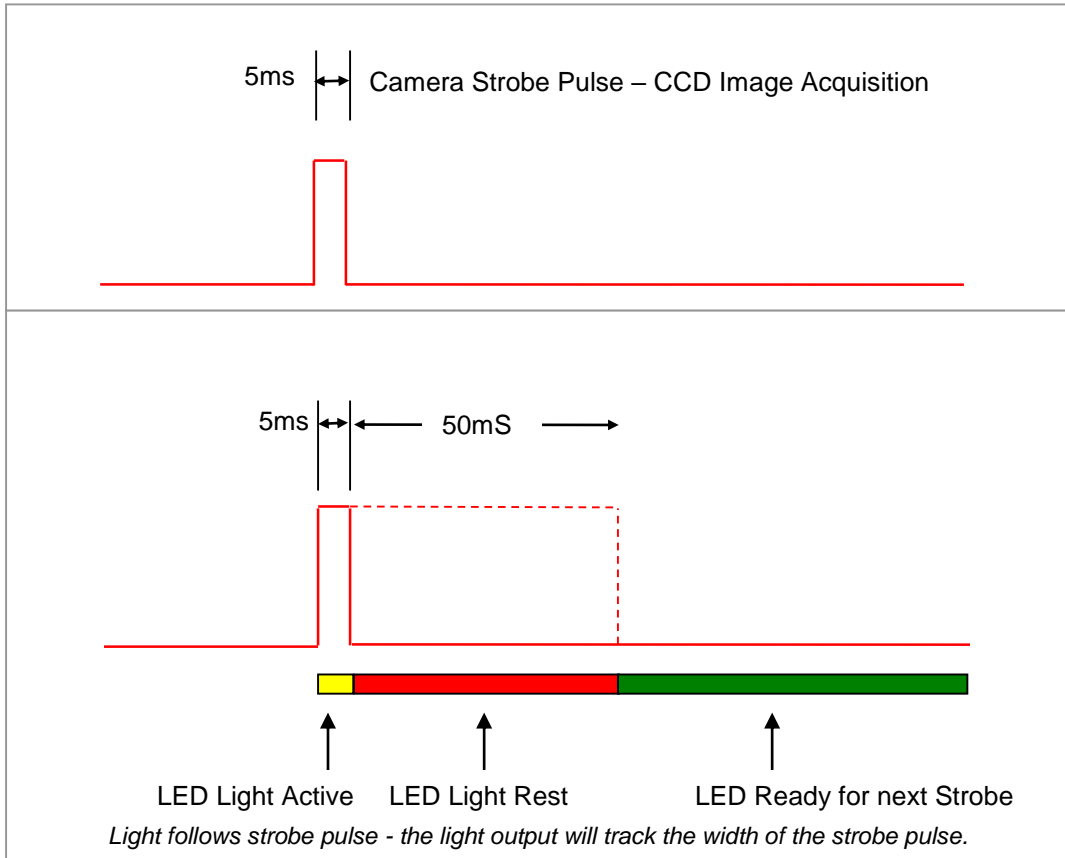
Additional heat sinking recommended in ambient air temperatures above 25°C.

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



### Duty Cycle on Performance of Light

All lights are pulse following



**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 5mS where Strobe Time is 5mS.**

$$R_T = \frac{5ms}{.1} = 50mS$$

Rest Time is 50ms for 5ms Strobe Time



## pattern replacement



Tools: small screwdriver or tweezers



Pattern Retaining Ring



Retainer Ring

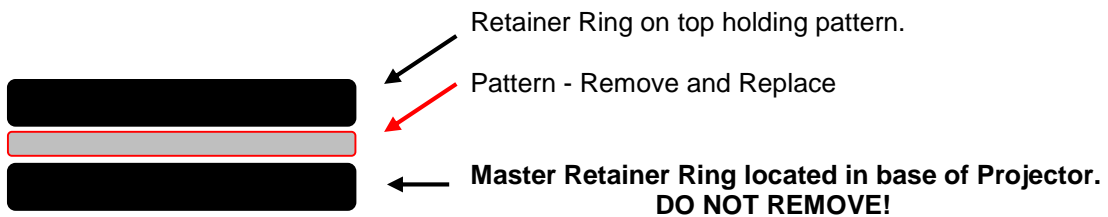


Pattern

### Removal of Retaining Ring

Screwdriver or Tweezers to remove retaining ring. Retaining Ring will turn Clockwise to install and Counter-Clockwise to remove. There are 2 small holes and 2 slots in ring to install/remove.

### Arrangement of Retainer Ring and Pattern.



## risk group

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

### Notice

Exempt Group: No photo biological 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: 470, 530, and WHI.