



## product introduction

The SP30 Series Projector Light offers the most intense projected spot size offered from a single source LED. The 9mm<sup>2</sup> die size emits 9x the intensity as a standard high output LED. The housing is constructed of 6061-T6 aluminum designed to dissipate as much heat as possible therefore allowing the LED to be run at a much higher current than the standard 1mm<sup>2</sup> die LED's. Multiple interchangeable pattern styles are available along with optional custom patterns. The SP30 Series is able to project a much thinner and define pattern of light compared to laser projectors making the SP30 a more accurate and better light.



## product features



- 5 Pin M12 Quick Disconnect
- Multiple Interchangeable Patterns
- 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
- One, 9mm<sup>2</sup> Die High Current LED



## product specifications

<b>Electrical Input</b>	24 VDC +/- 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 @ 24 VDC
<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% to 100% Clockwise increases intensity
<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>Lifespan</b>	100,000 hrs
<b>Ambient Temp.</b>	-20° - 50° C (-4° - 122° F)
<b>IP Rating</b>	IP50
<b>Weight</b>	~290g
<b>Compliances</b>	CE and RoHS
<b>IEC 62471 Rating</b>	See page 4



## product number key

# SP30 – XXX

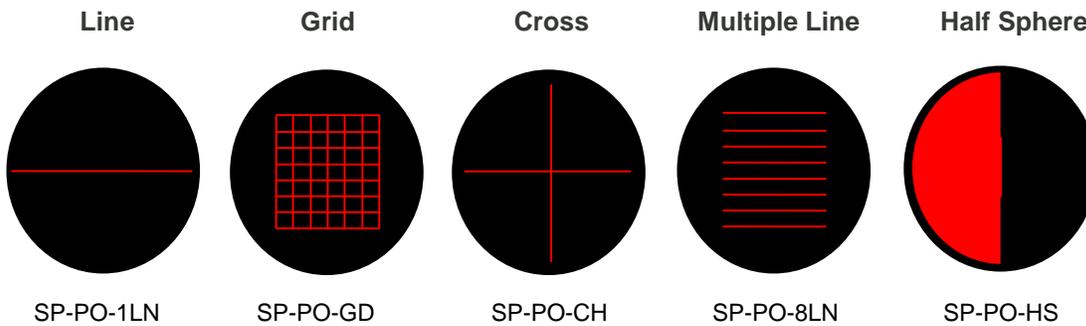
# —» Part Number Key

Product Family:  
Projector Light  
SP30

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

CE and RoHS Compliant

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



## 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 0-10 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

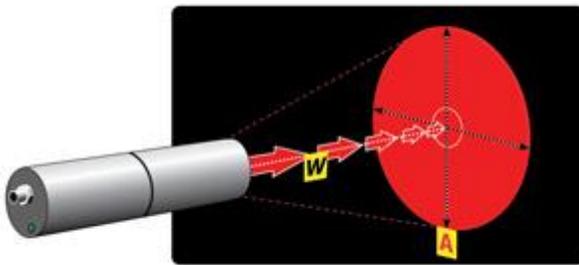


## optical performance

A = Diameter of Area

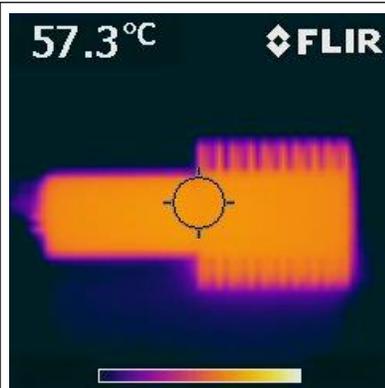
	100mm	150mm	200mm	300mm	400mm	500mm	600mm	750mm	1000mm	1500mm	2000mm
60mm			25			50					
100mm	8	12	16	25	35	35	50	50			
150mm	6	8	12	16	25	25	35	35	50	75	
200mm		6	8	12	16	16	25	25	35	50	100
300mm			6	8	12	12	16	16	25	35	50
400mm				6	8	8	12	12	16	25	35
500mm					6		8	12	16	25	25

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 SP30 series lights will run at 50 C° in an ambient temperature of 25 C°.



SP30 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.



## pattern replacement



Tools: small screwdriver or tweezers



Pattern  
Retaining Ring



Retainer Ring

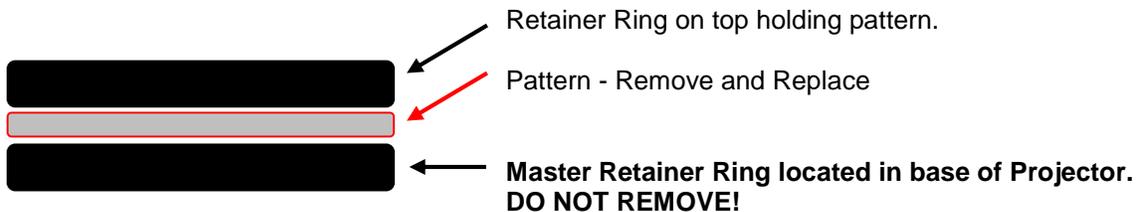


Pattern

### 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 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: 470, 530, and WHI.