



product introduction

The SP30 Series Projector Light offers the most intense projected spot size offered from a single source LED. The 9mm² 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 1mm² 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, 9mm² Die High Current LED



product specifications

Electrical Input	24VDC +/- 5%
Current	Max. 350mA
Wattage	Max. 8.4W
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 @ 24VDC
NPN Line	22mA @ Common (0VDC)
Yellow Indicator LED	LED Strobe Indicator ON = Light Active
Green Indicator LED	ON = Power
Continuous Mode	Light will be in continuous mode by leaving signal on strobe input active
Potentiometer	10 turn pot – Intensity control of 10%-100% Clockwise increases intensity
Analog Intensity	The output is adjustable from 10%-100% of brightness by a 0-10VDC signal
Connection	5 pin M12 connector
Lifespan	100,000 hrs
Ambient Temp.	-20° - 50° C (-4° - 122° F)
IP Rating	IP50
Weight	~290g
Compliances	CE and RoHS
IEC 62471 Rating	See page 4



product number key

SP30 – XXX

Product Family:
Projector Light
SP30

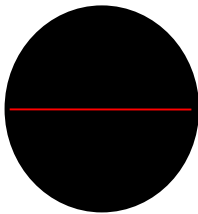
Color:
470 – Blue
53 Green
625 – Red
850 – IR
WHI - White

—» Part Number Key

CE and RoHS Compliant

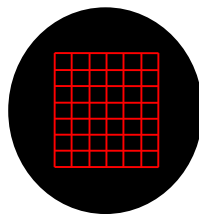
Standard patterns are available and custom patterns can be etched. Patterns are interchangeable.

Line



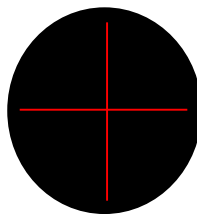
SP-PO-1LN

Grid



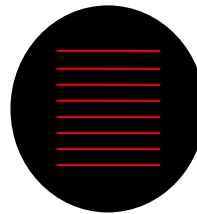
SP-PO-GD

Cross



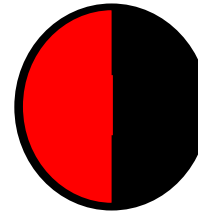
SP-PO-CH

Multiple Line



SP-PO-8LN

Half Sphere



SP-PO-HS



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 0-10VDC 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

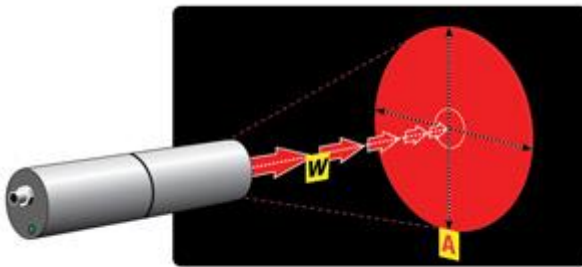


optical performance

A = Diameter of Area

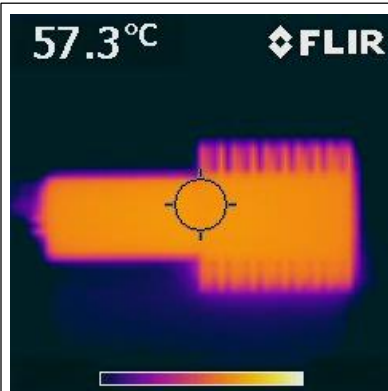
	100mm	150mm	200mm	300mm	400mm	500mm	600mm	750mm	1000mm	1500mm	2000mm
60mm			25			50					
100mm	8	12	16	25	35	35	50	50			
150mm	6	8	12	16	25	25	35	35	50	75	
200mm		6	8	12	16	16	25	25	35	50	100
300mm			6	8	12	12	16	16	25	35	50
400mm				6	8	8	12	12	16	25	35
500mm					6		8	12	16	25	25

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.



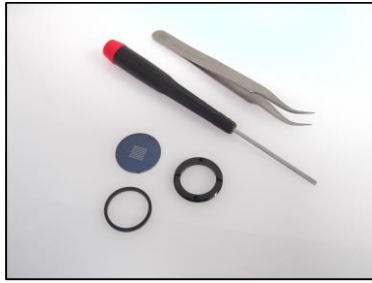
SP30 series aluminum enclosures designed to transfer heat away from the high power LED.

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

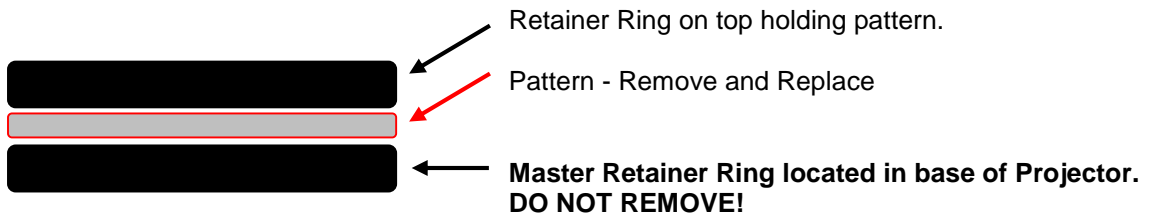


Pattern

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.