



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 LEDs



product specifications

Electrical Input	24 VDC +/- 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 @ 24 VDC
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% to 100% Clockwise increases intensity
Analog Intensity	The output is adjustable from 10 -100% of brightness by a 0 -10 VDC 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 5



product number key

SP30 – XXX - XX —» Part Number Key

Product Family:
Projector Light
SP30

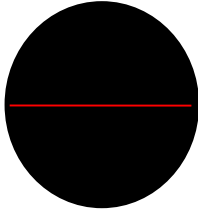
Color:
470, 530,
625, 850 &
WHI (White)

Pattern:
L-Line
G-Grid
CH-Cross

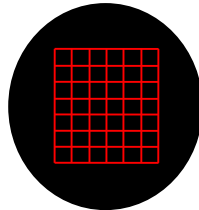
CE and RoHS Compliant

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

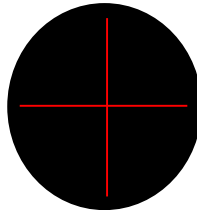
Line



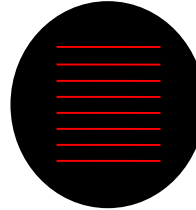
Grid



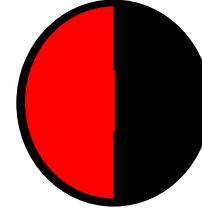
Cross



Multiple Line



Edge



warnings

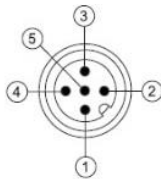


Attention

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



1 – 24V
2 – NPN
3 – GND
4 – PNP
5 – 0-10V

Standard M12 mating cable color code:

BROWN
WHITE
BLUE
BLACK
*GRAY (GREEN/YELLOW)

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	Wire Color	Function	Signal
1	BROWN	Power	+24 VDC
2	WHITE	NPN Strobe	GND for Active ON
3	BLUE	Ground	GND
4	BLACK	PNP Strobe	4VDC to 30VDC for Active ON
5	GREEN	Analog Intensity Control	0-10 VDC



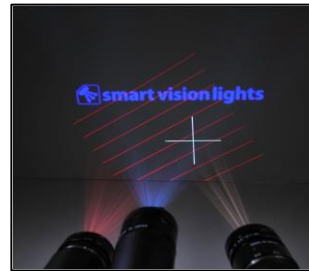
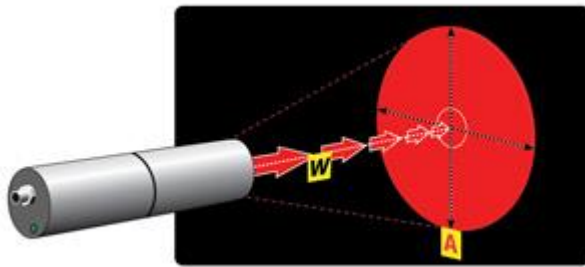
optical performance

W = Working Distance

A = Diameter of Area

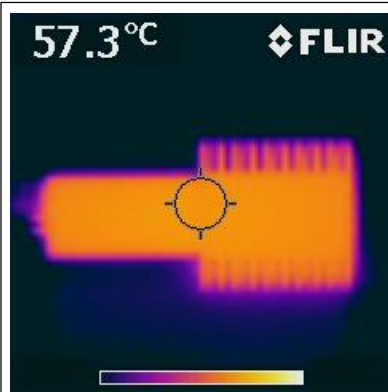
	100mm	150mm	200mm	300mm	400mm	500mm	600mm	750mm	1000mm	1500mm	2000mm
60mm			25			50					
100mm	8	12	16	25	35	35	50	50			
150mm	6	8	12	16	25	25	35	35	50	75	
200mm		6	8	12	16	16	25	25	35	50	100
300mm			6	8	12	12	16	16	25	35	50
400mm				6	8	8	12	12	16	25	35
500mm					6		8	12	16	25	25

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



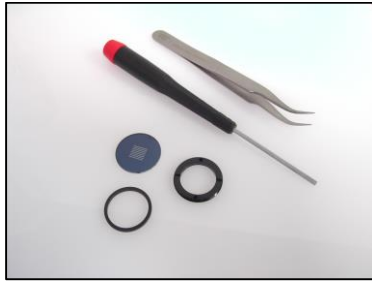
SP30 series aluminum enclosures designed to transfer heat away from the high power LED.

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

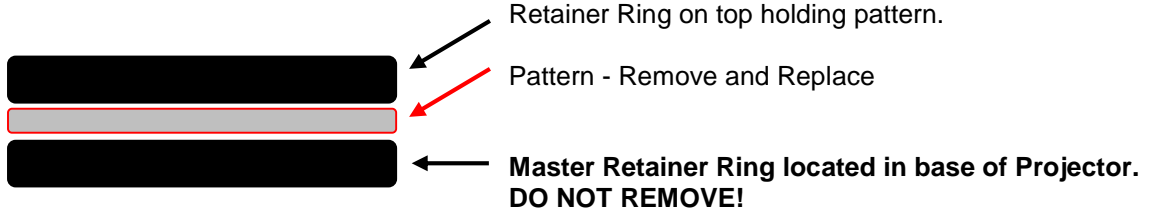


Pattern

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.