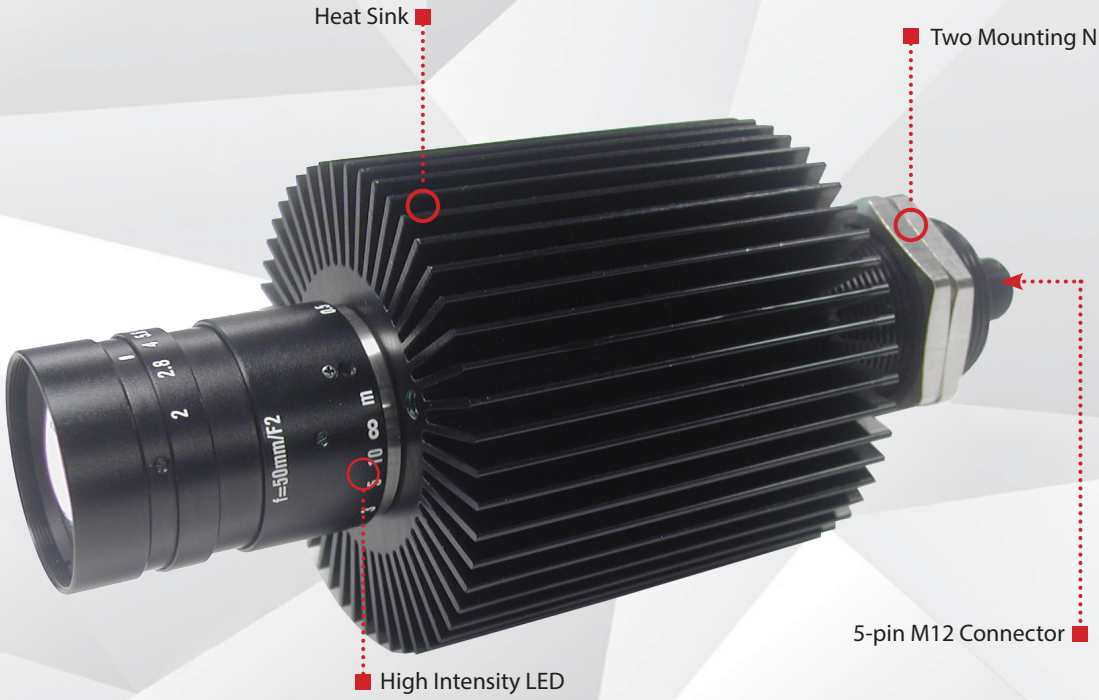
smart vision lights

SXP30 Projector SPOTLIGHT
STRUCTURED LIGHT

PRODUCT DATA SHEET



Warranty	Compliant	Compliant	Rated	Connector
10 YEAR	IEC 62471	CE RoHS	IP 65	5 PIN M12

PRODUCT HIGHLIGHTS

- ✓ 5-pin M12 quick connect
- ✓ Built-in driver, no external wiring to driver needed
- ✓ PNP and NPN strobe input
- ✓ Multiple interchangeable patterns
- ✓ Standard optics provides tight focused light

PRODUCT DESCRIPTION

The SXP30 Series Projector Light offers the most intense projected pattern offered from an LED. The 9mm^2 die size emits 9x the intensity as a standard high output LED. The housing is constructed of a finned aluminum heat sink and designed to dissipate as much heat as possible therefore allowing the LED to be run at a much higher current than the standard 1mm^2 die LED's. Multiple interchangeable pattern styles are available along with optional custom patterns. The SXP30 Series is able to project a thinner and more define pattern of light compared to laser projectors making the SXP30 a more accurate light.

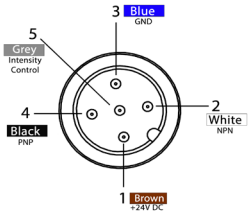
PRODUCT SPECIFICATIONS

Electrical Input	24VDC +/- 5%
Input Current	Max. 600 mA
Wattage	Max. 14.5 W
Strobe Input	PNP > +4VDC or greater to activate | NPN > GND (<1VDC) to activate
PNP Line	4 mA @ 4VDC | 10 mA @ 12VDC | 20 mA @ 24VDC
NPN Line	15 mA @ Ground (0VDC)
Continuous Mode	NPN can be tied to ground **OR** PNP can be tied to 24VDC (not both)
Red Indicator LED	LED Strobe Indicator ON = Light Active
Green Indicator LED	ON = Power
Analog Intensity	The output is adjustable from 10%–100% of brightness by a 1–10VDC signal. (Jumpering pin 5 to pin 1 will provide maximum intensity)
Connection	5-pin M12 connector
Ambient Temperature	-18º–40º C (0º–104º F)
IP Rating	IP65
Weight	~413g
Compliances	CE, RoHS, IEC 62471
Warranty	10 years; see smartvisionlights.com/warranty for more information.

RESOURCE CORNER

Additional resources available on our website including CAD files, videos and application examples.

WIRING CONFIGURATION



Pin layout for light (Male Connector)

Pins	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	1–10VDC	GREY *

* Some cables use green/yellow for 1-10V adjustment

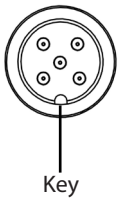
If Analog 1–10VDC is not used to control light intensity;

+VDC (24VDC) must be connected to Analog Input - Jumper pin 5 to pin 1

CONNECTING A 5-PIN M12 CABLE

WARNING:

When connecting a 5-pin M12 cable to the male connector on the SXP30, do not twist the cable. Tighten the nut only. Twisting the cable may result in damage to the pins.

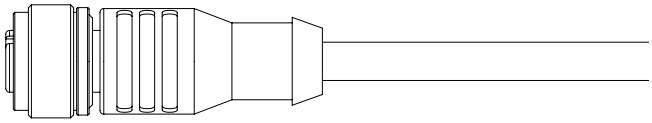


Line up key on the cable to key on the male connect before turning the nut. Then turn nut until it is seated.

DO Tighten Nut

Push Here

If nut is not turning smoothly, push cable forward while turning nut until nut is seated.

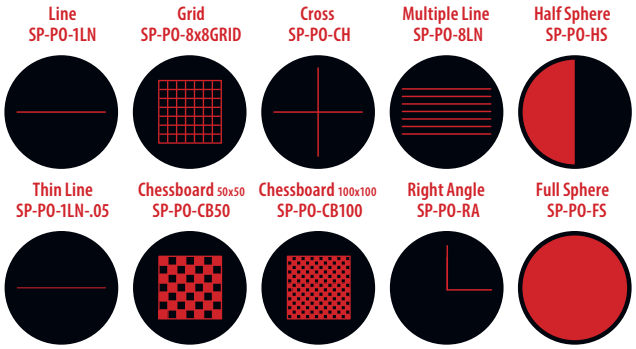


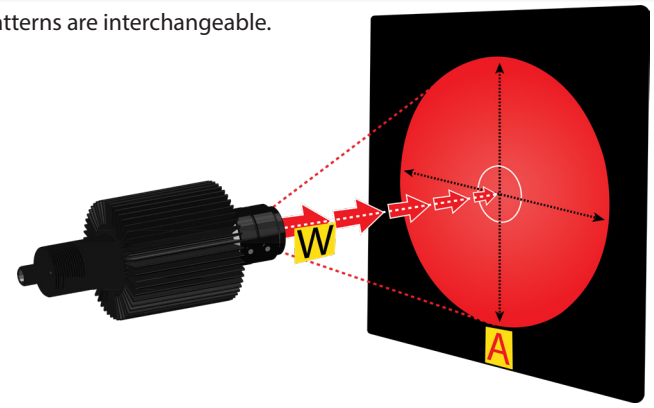
Twisting the cable may cause damage to the male connector pins on the LE.

DO NOT Twist Cable

LENSES AND PATTERNS

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

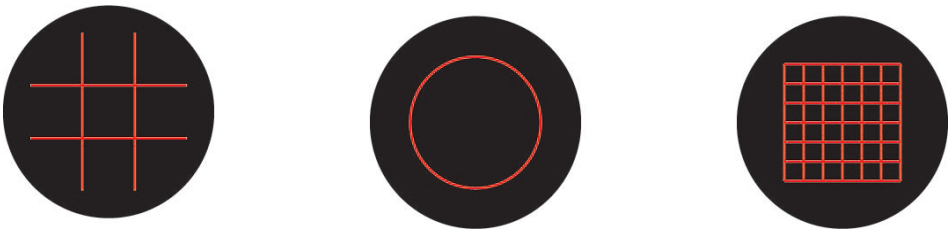




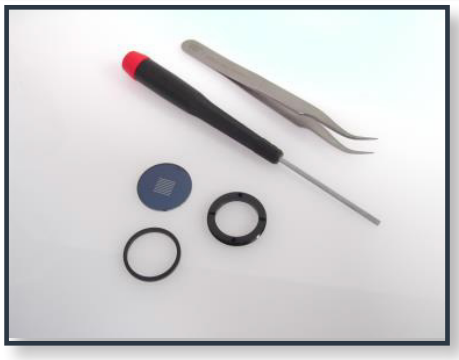
Lenses	
Part #	**Description**
CLENS0006	Tamron 1/1.8" Format 2MP 6mm Megapixel Lens
CLENS0008	Tamron 1/1.8" Format 2MP 8mm Megapixel Lens
CLENS00012	Tamron 1/1.8" Format 2MP 12mm Megapixel Lens
CLENS00016	Tamron 1/1.8" Format 2MP 16mm Megapixel Lens
CLENS00025	Tamron 1/1.8" 25 mm F/1.6 with Lock for Megapixel Cameras
CLENS00050	Tamron CCTV 50mm Lens

CUSTOM PATTERNS

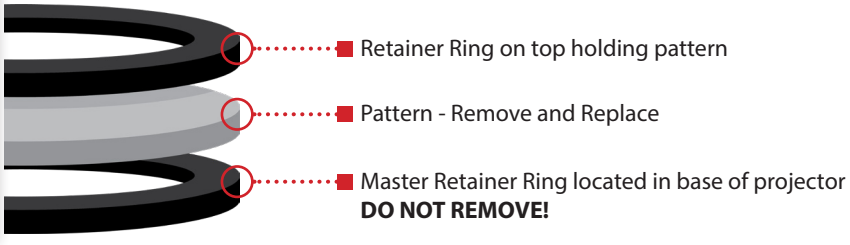
Custom patterns are available upon request.



PATTERN REPLACEMENT

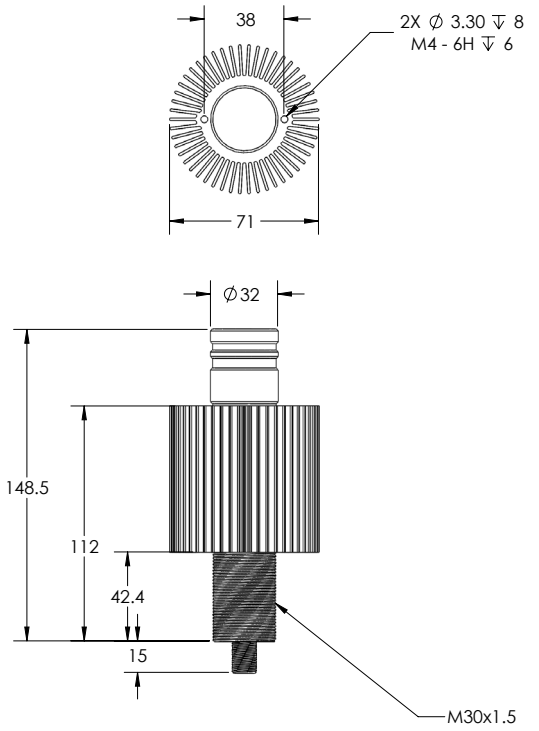


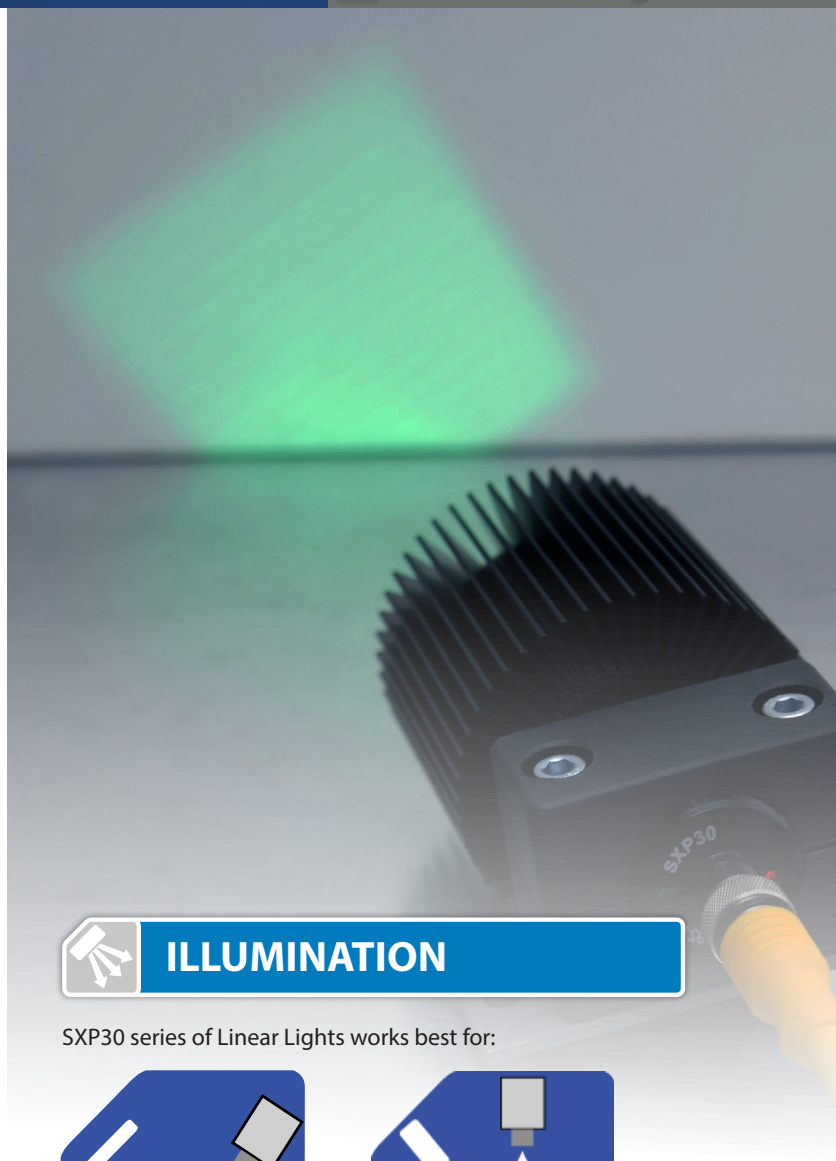
Screwdriver or Tweezers are recommended to remove retaining ring, but **are not included**. Retaining Ring will turn Clockwise to install and Counter-Clockwise to remove. There are 2 small holes and 2 slots in ring to install/remove. Install the skinny metal side of pattern towards the LED.



PRODUCT DRAWING

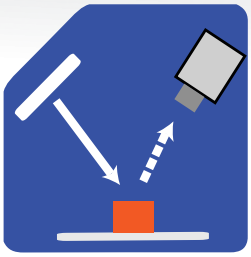
CAD files available on our website.
Dimensions are in mm.



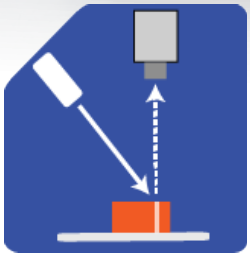


ILLUMINATION

SXP30 series of Linear Lights works best for:



Bright Field



Projector

EYE SAFETY

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, 850, and 940.

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, 505, 530, and WHI.

PART NUMBER

SXP30 – □□□

COLOR:

WHI | 470 | 505 | 530 | 625 | 850

Part Number Examples:

SXP30-625 SXP30, 625 nm Red Wavelength,

SXP30-WHI SXP30, White

Additional wavelengths options available upon request

SWIR SHORT WAVE INFRARED

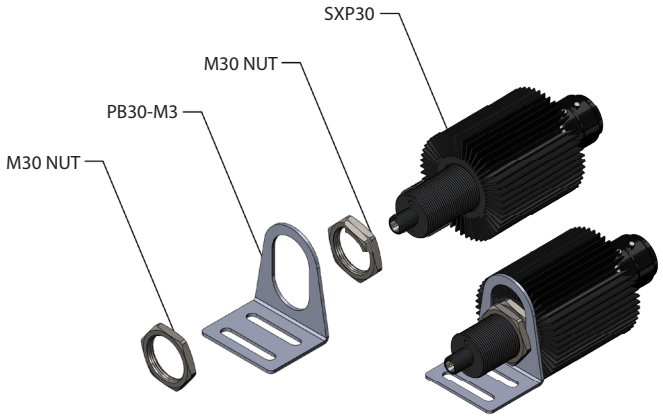
This light is available in our SWIR LEDs
(1050 nm, 1200 nm, 1300 nm, 1450 nm, 1550 nm)

MOUNTING

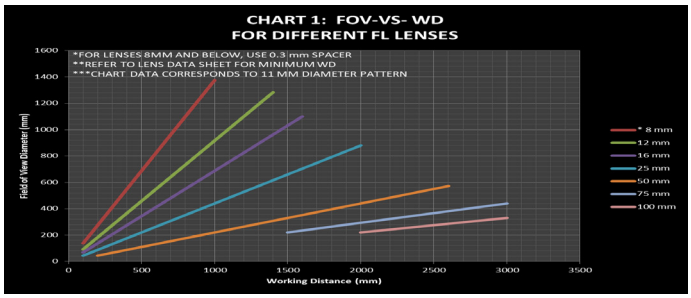
Two M30 nuts for mounting are included with the light.

Example of the SXP30 shown using the Slotted Right Angle mount (**Part Number: PB30-M3**).

See accessories for additional mounting options.



LENS CONFIGURATION



FOV = Field of View Diameter
FL = Focal Length
WD = Working Distance
PS = Pattern Size
M = Magnification

Finding Focal Length

$$FL = \frac{PS \cdot WD}{FOV}$$

Magnification

$$M = \frac{FOV}{PS}$$

ACCESSORIES

Power Cables

Lengths	Part Number
5 m	5PM12-5
10 m	5PM12-10
15 m	5PM12-15

Power Adapters *

Description	Part Number
AC, 24 Volt, 1.7 Amp	T1 Power Supply

* **European Versions Available** (Add -EURO to end of T1 or T2. Example T1-EURO Power Supply)

Lens Spacers

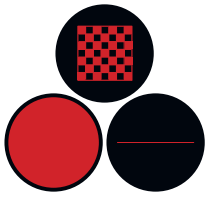
Lens Spacer Size	Part Number
0.5 mm	LENS SPACER-0.5
1.0 mm	LENS SPACER-1.0
2.0 mm	LENS SPACER-2.0
5.0 mm	LENS SPACER-5.0
10.0 mm	LENS SPACER-10.0
15.0 mm	LENS SPACER-15.0
20.0 mm	LENS SPACER-20.0
25.0 mm	LENS SPACER-25.0
30.0 mm	LENS SPACER-30.0
35.0 mm	LENS SPACER-35.0
40.0 mm	LENS SPACER-40.0
45.0 mm	LENS SPACER-45.0
50.0 mm	LENS SPACER-50.0

Lenses

Part Number

*see lenses and patterns section for options

Patterns



Part Number

*see lenses and patterns section for options

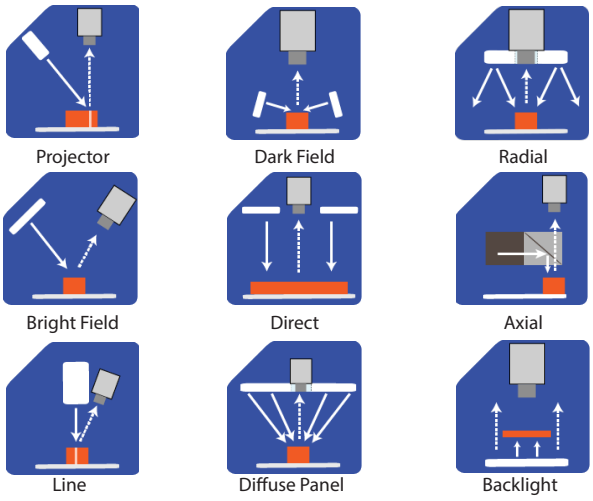
GLOSSARY

This glossary covers all Smart Vision Lights product families; some content in this section may not apply to this specific light.

TERMINOLOGY

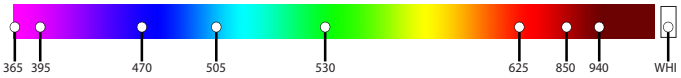
OverDrive™ Lights include an integrated high-pulse driver for complete LED light control.
Continuous Operation Lights stay on continuously.
Multi-Drive™ Combines continuous operation and OverDrive™ strobe (high-pulse operation) mode into one easy-to-use light.
Built-in Driver The built-in driver allows full function without the need of an external controller.
Camera to Light Connecting the light directly to the camera, without the need for additional controllers or equipment.
Polarizers Filters that reduce reflections on specular surfaces.
Diffuser Used to widen the angle of light emission, reduce reflections, and increase uniformity.

TYPES OF ILLUMINATIONS



COLOR/WAVELENGTHS LEGEND

Wavelengths options range from 365 nm to 1550 nm. *
Additional wavelengths available for many light families.



*See Part Number section for ***this light's*** available standard wavelengths.

SWIR SHORT WAVE **INFRARED**

Shortwave Infrared LEDs are available in 1050 nm, 1200 nm, 1300 nm, 1450 nm, and 1550 nm.