



smart
vision lights

ODSXP30 Projector SPOTLIGHT STRUCTURED LIGHT

P R O D U C T D A T A S H E E T



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

- ✓ 5-pin M12 quick connect
- ✓ Kit available to withstand dust and splash-up environments
- ✓ 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

ODSXP30

The ODSXP30 Series Projector Spot Light offers the most intense projected pattern offered from an LED. The 9mm² 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 1mm² die LED's. Multiple interchangeable pattern styles are available along with optional custom patterns. The ODSXP30 Series is able to project a thinner and more define pattern of light compared to laser projectors making the ODSXP30 a more accurate light.

IP65-KIT

The IP65-KIT works to seal and protect the ODSXP30 to be able to withstand dust and splashes of water, therefore, creating an IP65 rating.

**** Any ODSXP30 Projector Spot Light that was purchased before October 1, 2019 will not be compatible with the IP65-KIT and will need to be replaced. This is due to a manufacturing change to the heat sink to allow the bottom gasket and lens cover to be attached to the heat sink with screws.**



WHAT'S INCLUDED

When you order an ODSXP30 Projector Spot Light, the following item is included:



ODSXP30
PROJECTOR SPOT LIGHT

When you order a Projector Spot Light and IP65-KIT, the following items are included:



ODSXP30
PROJECTOR SPOT
LIGHT

+



IP65-KIT
50 OR 70 MM
LENS OPTION



RESOURCE CORNER

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



PRODUCT SPECIFICATIONS

ODSXP30

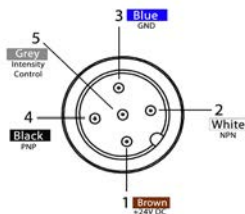
Electrical Input	24VDC +/- 5%
Input Current	Max. 15A
Wattage	Max. 360 W
Strobe Input	PNP > +4VDC or greater to activate NPN > GND (<1VDC) to activate
PNP Line	4 mA @ 4VDC 10 mA @ 12 V DC 20 mA @ 24VDC
NPN Line	15 mA @ Ground (0VDC)
Continuous Mode	NPN can be tied to ground OR PNP can be tied to 24VDC (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	-18°–40° C (0°–104° F)
IP Rating	IP50
Weight	~413g
Compliances	CE, RoHS, IEC 62471

IP65-KIT

IP Rating	IP65
Weight	~0.1kg



WIRING CONFIGURATION



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

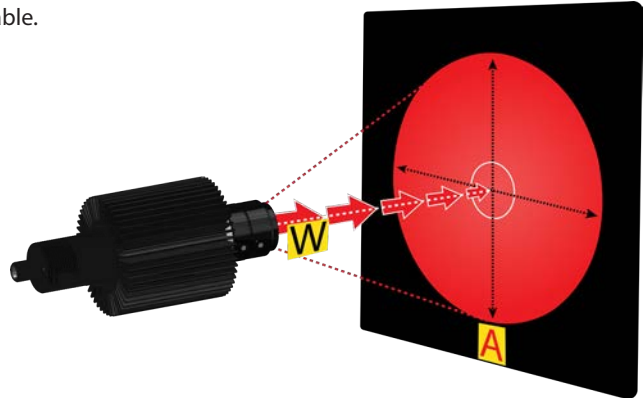
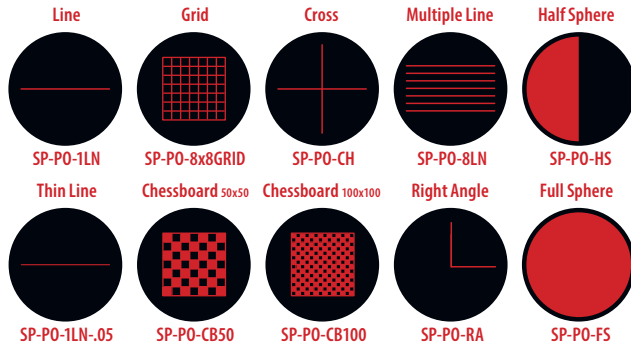
If Analog 1–10VDC is not used to control light intensity; +VDC (24VDC) must be connected to Analog Input - Jumper pin 5 to pin 1

Pin layout for light (Male Connector)



LENSES AND PATTERNS

Standard patterns are available to be etched. Patterns are interchangeable.

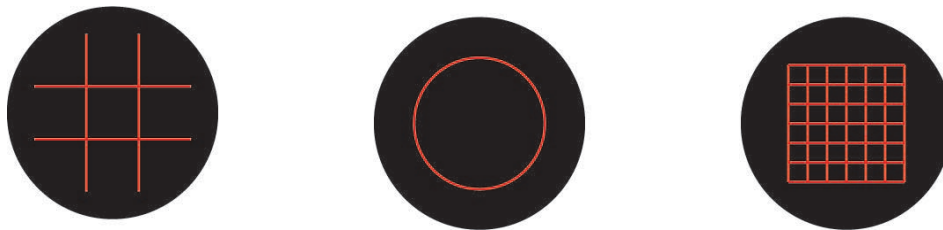


Lenses	
Part #	Description
CLENS0006	Tamron 1/1.8" Format 2MP 6mm Megapixel Lens
CLENS0008	Tamron 1/1.8" Format 2MP 8mm Megapixel Lens
CLENS00012	Tamron 1/1.8" Format 2MP 12mm Megapixel Lens
CLENS00016	Tamron 1/1.8" Format 2MP 16mm Megapixel Lens
CLENS00025	Tamron 1/1.8" 25 mm F/1.6 with Lock for Megapixel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



CUSTOM PATTERNS

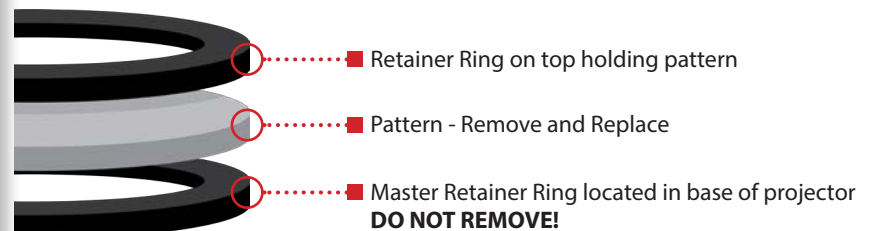
Custom patterns are available upon request.



PATTERN REPLACEMENT

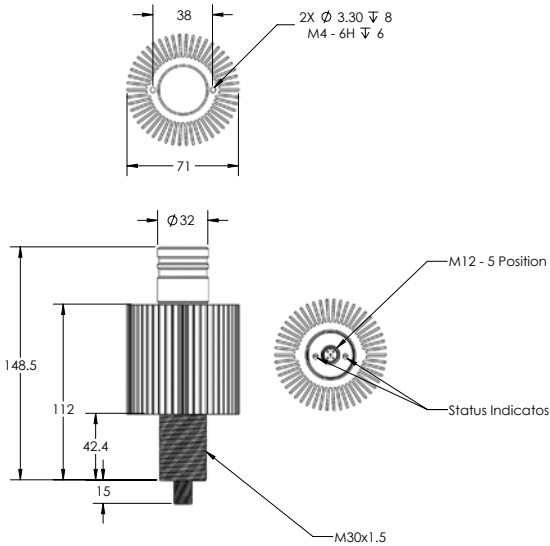


Screwdriver or Tweezers are recommended to remove retaining ring, but **are not included**. Retaining Ring will turn Clockwise to install and Counter-Clockwise to remove. There are 2 small holes and 2 slots in ring to install/remove.



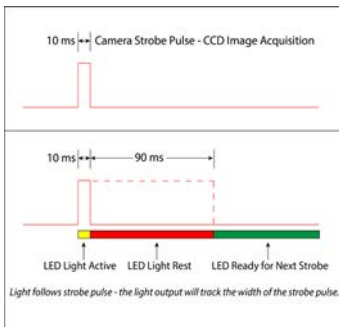
PRODUCT DRAWING

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



DUTY CYCLE

The Duty Cycle (D) is related to the Strobe Time (ST) and Rest Time (RT).



Calculating Rest Time

$$RT = \frac{ST}{D} - ST$$

RT = Rest Time
ST = Strobe Time
D = Duty Cycle

Example

$$RT = \frac{10 \text{ ms}}{.1} - 10 \text{ ms} = 90 \text{ ms}$$

Rest Time is 90 ms for 10 ms Strobe Time

Maximum Duty Cycle for OverDrive™ light is 10% (0.1)

EYE SAFETY

According to IEC 62471:2006. Full documentation upon request

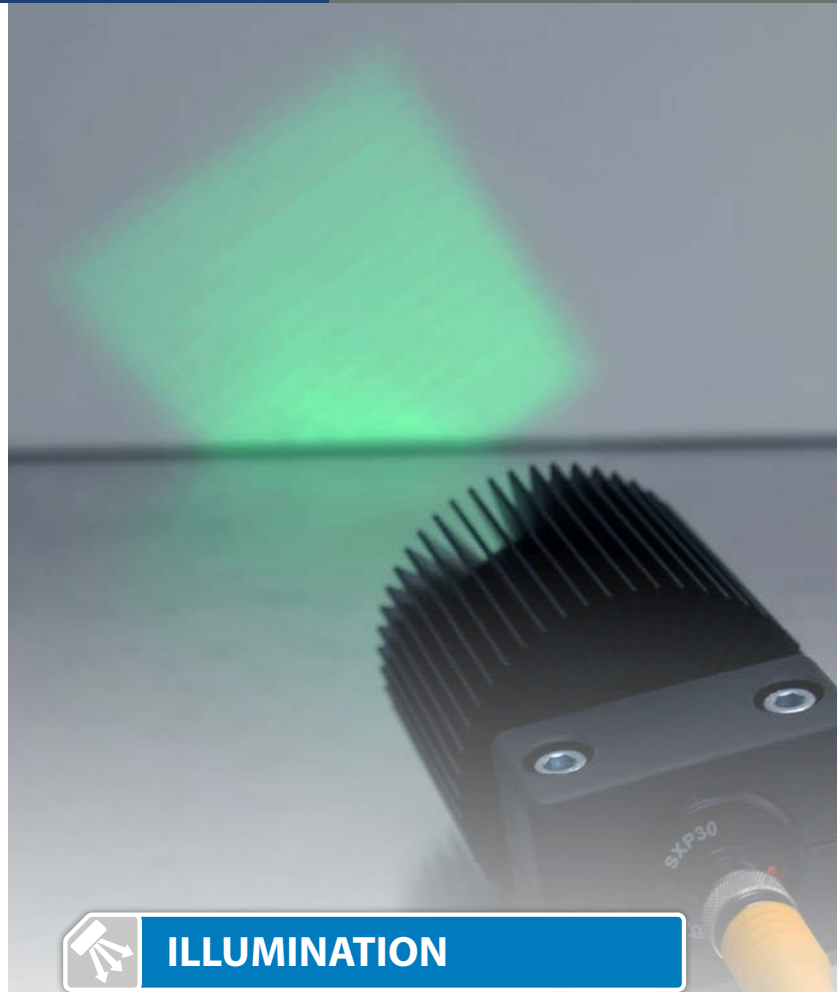


Notice

Exempt Group: No photobiological hazard to eyes or skin even for continuous, unrestricted use. Applicable for wavelengths: 625, 850, and 940.

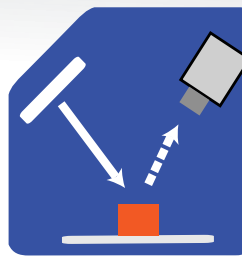
Caution

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.

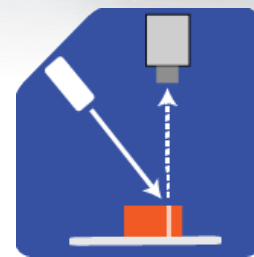


ILLUMINATION

ODSXP30 Series of Projector Spot Lights works best for:



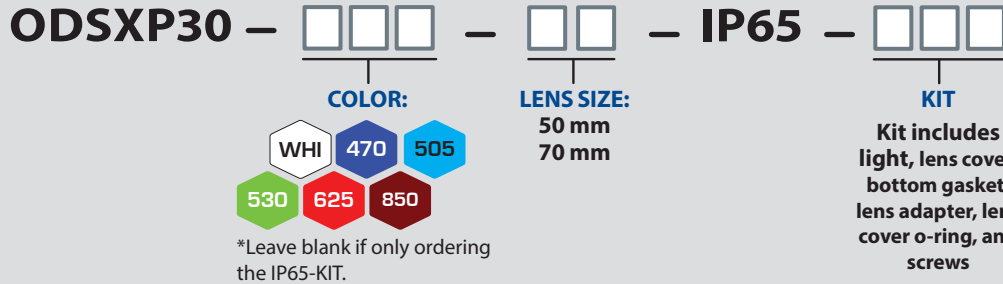
Bright Field



Projector



PART NUMBER



Part Number Examples:

ODSXP30-625	SXP30, 625 nm Red Wavelength (Light Only)
ODSXP30-625-70-IP65-KIT	SXP30, 625 nm Red Wavelength, 70 mm lens cover, bottom gasket, lens adapter, lens cover o-ring, and screws
SXP30-70-IP65-KIT	IP65-KIT with 70 mm lens cover, bottom gasket, lens adapter, lens cover o-ring, and screws (No Light)



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

Additional wavelengths options available upon request.

IMPORTANT:

Any ODSXP30 Projector Spot Light that was purchased before October 1, 2019 will not be compatible with the IP65-Kit and will need to be replaced. This is due to a manufacturing change to the heat sink to allow the bottom gasket and lens cover to be attached to the heat sink with screws.

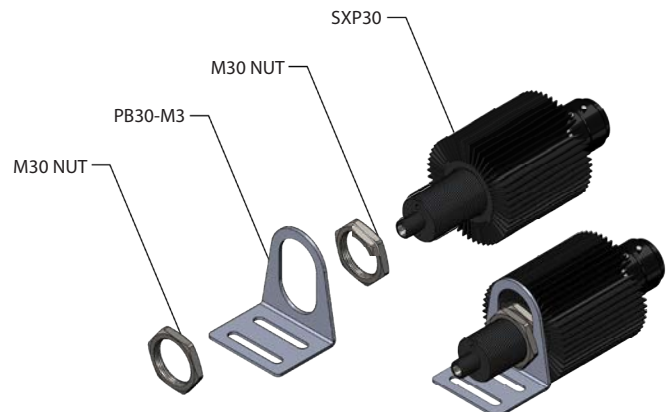


MOUNTING

Two M30 nuts for mounting are included with the light.

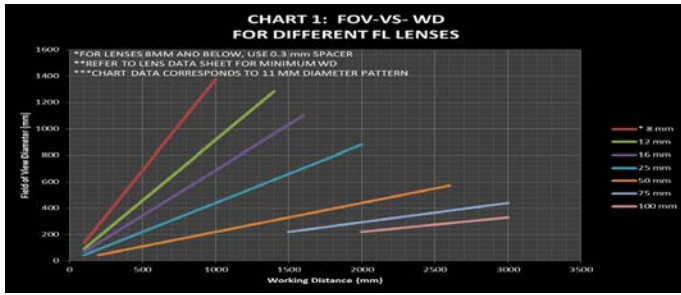
Example of the ODSXP30 shown using the Slotted Right Angle mount (**Part Number: PB30-M3**).

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

Lenses



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.

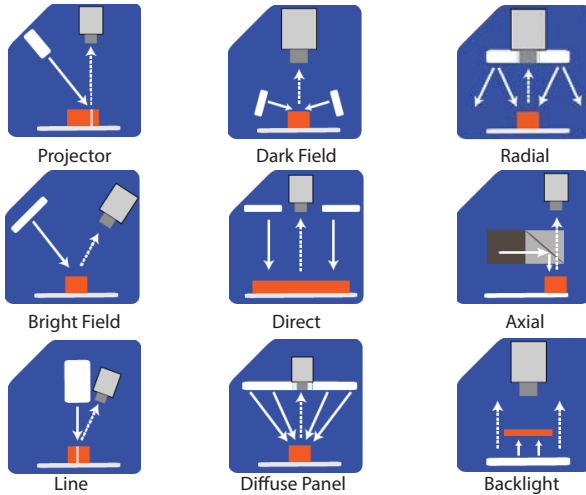
Built-in Driver The built-in driver allows full function without the need of an external controller.

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.

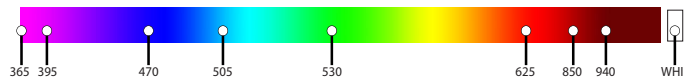
Diffuser Used to widen the angle of light emission, reduce reflections, and increase uniformity.

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.



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