smart vision lights

ODSXW30 *Prox Light*

SPOTLIGHT

WASHDOWN | OVERDRIVE™

PRODUCT DATA SHEET

OverDRIVE

Warranty	Compliant	Compliant	Rated	Connector
10 YEAR	IEC 62471	CE RoHS	IP 68	5 PIN M12

PRODUCT HIGHLIGHTS

- ✓ OverDrive™ — Up to 2.5 times brighter than a standard SXW30 Prox Light
- ✓ SafeStrobe™ technology ensures protectd operation of LEDs
- ✓ 5-pin M12 quick connect
- ✓ PNP and NPN trigger signal input
- ✓ Washdown witn 316 stainless steel housing
- ✓ Standard optics provides tight focused light

PRODUCT DESCRIPTION

The ODSXW30 Series of Spot Lights features a 100% waterproof stainless steel barrel style housing, specially designed for food industry and washdown environments where water and corrosive materials are present. The ODSWX30 produces a homogeneous light pattern at any recommended working distance for a very define and even projected spot. The ODSXW30 light output is 2.5 times that of the standard SXW30. Built-in SafeStrobe™ technology ensures protection of the LED while providing maximum output. NPN or PNP strobe triggers can be used to control the pulse of the light. Intensity of the light can be controlled via 1–10 V DC remote analog signal.

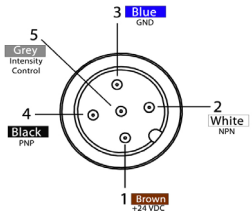
PRODUCT SPECIFICATIONS

Electrical Input	24 V DC +/- 5%
Input Current	Peak 1.25 A during strobe.
Input Power	Peak 30 W during strobe.
PNP Trigger	2.8 mA @ 4 V DC | 8.8 mA @ 12 V DC | 20 mA @ 24 V DC
NPN Trigger	14.4 mA @ Ground (0VDC)
Trigger Input	PNP > +4 VDC (24 VDC max.) to activate or NPN ≥ GND <1VDC to activate (not both)
Duty Cycle	Max 10%
Strobe Frequency	Max 4 kHz or 1 / Duty Cycle as calculated, whichever is less.*
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 1–10 V DC signal. (Jumpering pin 5 to pin 1 will provide maximum intensity)
Connection	5-pin M12 connector
Operating Temperature	-10° - 40° C (14°-104° F) | RH max 80% non-condensing humidity
Storage Temperature	-20° - 70° C (-4°-158° F) | RH max 80% non-condensing humidity
IP Rating	IP68
Weight	~266g
Compliances	CE, RoHS, IEC 62471
Warranty	10 years**

See page 5 for more information

***See SmartVisionLights.com/warranty for details*

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	OverDrive™ Signal	1–10 V DC	GREY *

Some cables use green/yellow for pin 5

For maximum intensity, it is possible to tie pin 5 to pin 1 at +24VDC.

For proper light function, apply either a PNP or NPN signal, not both.

Failure to supply light with correct input current will result in inconsistent lighting behavior.
(see Product Specifications for requirements)

RESOURCE CORNER

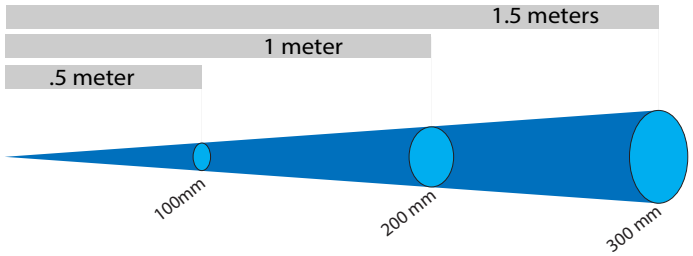
Additional resources available on our website including CAD files, videos and application examples.

Smart Vision Lights
5113 Robert Hunter Dr
Norton Shores, MI 49441
P: +1 231.722.1122 | F: +1 231.722.9922
smartvisionlights.com
techsupport@smartvisionlights.com
Opened: Monday - Friday | 8am - 5pm EST

LIGHT PATTERNS

Smart Vision Lights recommends the ODSXW30 be used at a working distance between 500 mm and 4000 mm.

Beam Diameter (White Light) – 6500 K

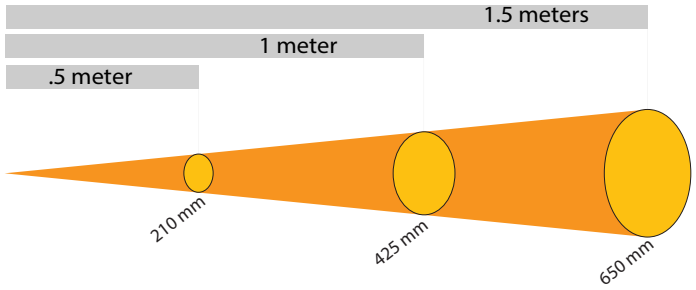


LIGHTING PATTERN FOR THE ODSXW30 (NARROW)

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
.5m (19.7")	100mm (~4") D
1m (39.4")	200mm (~8") D
1.5m (59")	300mm (~12") D

Typical Output Preformance	Illuminance (Lux)
Distance = .5 meter	
Illumination measurement taken on White Lights - 6500K	

Beam Diameter (White Light) – 6500 K

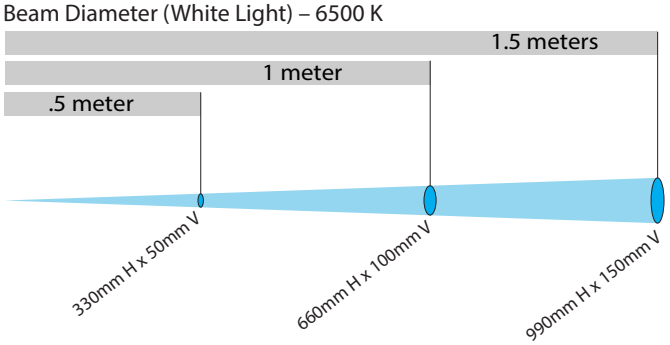


LIGHTING PATTERN FOR THE ODSXW30 (WIDE)

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
.5m (19.7")	210mm (~6")
1m (39.4")	425mm (~17")
1.5m (59")	650mm (~22")

Typical Output Preformance	Illuminance (Lux)
Distance = .5 meter	
Illumination measurement taken on White Lights - 6500K	

Beam Diameter (White Light) – 6500 K



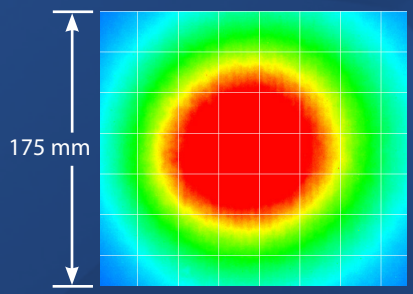
LIGHTING PATTERN FOR THE ODSXW30 (LINE)

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
.5m (19.7")	330mm (~13") H x 50mm (~2") V
1m (39.4")	660mm (~26") H x 100mm (~4") V
1.5m (59")	990mm (~39") H x 150mm (~6") V

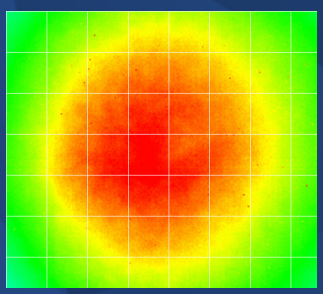
Typical Output Preformance	Illuminance (Lux)
Distance = .5 meter	
Illuminance measurement taken on White Lights - 6500K	

The ODSXW30 Linear Light produces a uniform light pattern.

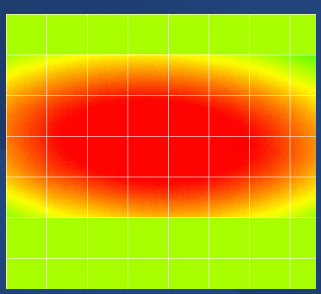
Working Distance = 500 mm Grid set to 25 mm x 25 mm



Narrow



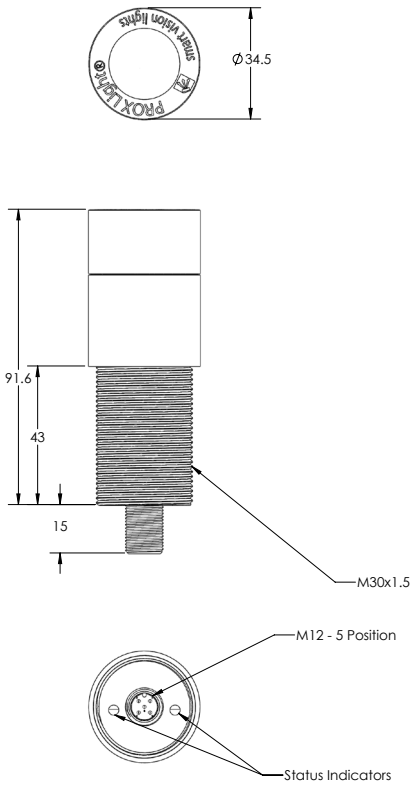
Wide



Line

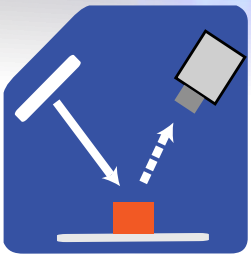
PRODUCT DRAWING

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

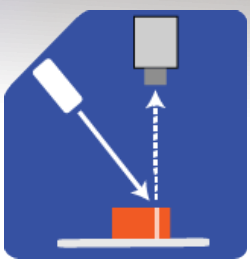


ILLUMINATION

ODSXW30 series of Linear Lights works best for:



Bright Field



Projector

EYE SAFETY

According to IEC 62471:2006. Full documentation upon request with purchase of product.

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.

Caution

Risk Group 2: UV emitted from this product. Eye or skin irritation may result from exposure. Use appropriate shielding. Does not pose optical hazard if aversion responses limit exposure. Applicable for wavelengths: 365 and 395.

PART NUMBER

ODSXW30 – □□□ – □

COLOR:

LENS:

Leave blank for standard (narrow)

W = Wide

L = Line

Part Number Examples:

ODSXW30-625 ODSXW30, 625 nm Red Wavelength, Standard (Narrow) Lenses

ODSXW30-WHI-L ODSXW30, White, Line Lenses

Additional wavelengths options available upon request

STANDARD LENS OPTICS

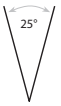
NARROW

Narrow lens are standard.

Standard lenses create a narrow beam of illumination. They can be used when long working distances are needed. Narrow are 10° angle lenses.

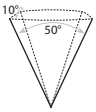
WIDE

Wide lenses create a large area of illumination. Wide lenses can be used when short working distances are needed. Wide lenses create a flood light effect. Wide are 25° angle cone lenses.



LINE

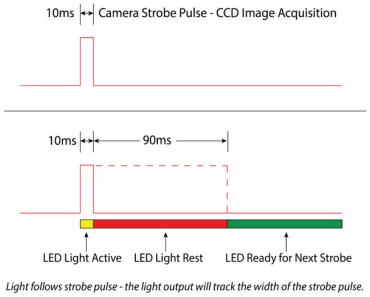
Line lenses create a thin narrow beam of illumination. Line lenses create a line of light when used on the ODSXW30 Prox light. Line are 10° and 50° angle cone lenses.



** Additional lens options available upon request.*

DUTY CICLE

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



Light follows strobe pulse - the light output will track the width of the strobe pulse.

Calculating Rest Time

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

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

Example

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

Rest Time is 90 ms for 10 ms Strobe Time

Calculating Strobe Rate

$$SR = \frac{D}{ST}$$

SR = Strobe Rate (strobes per second)
ST = Strobe Time (seconds)
D = Duty Cycle

Example

$$1000 = \frac{0.1}{0.0001}$$

Strobe Rate is 1000 strobes per second

Calculating Duty Cycle

$$D = ST \times SR$$

SR = Strobe Rate (strobes per second)
ST = Strobe Time (seconds)
D = Duty Cycle

Example

$$0.1 = 0.0001 \times 1000$$

Duty Cycle is 10% (0.1)

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

Maximum Strobe Frequency is 1/ calculated duty cycle or 4,000 strobes per second, whichever is less.

ACCESSORIES

Power Cables

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

Power Cables (Wash-down)

Lengths	Part Number
15 m	W5PM12-15

Washdown cables have a 316 Stainless Steel connector(s).

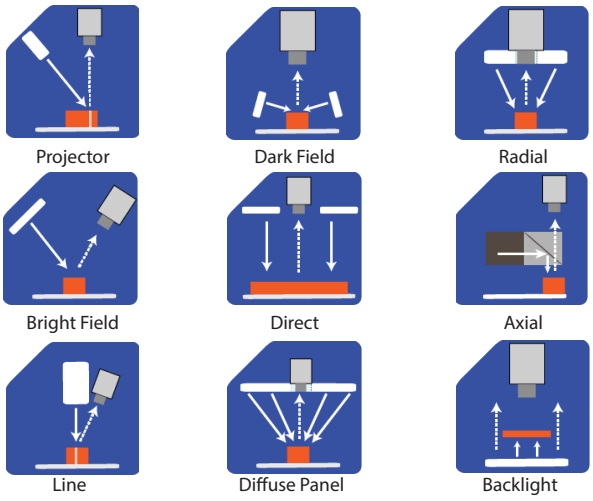
GLOSSARY

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

TERMINOLOGY

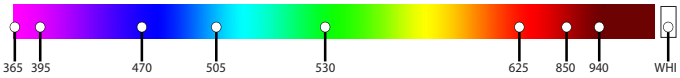
OverDrive™ Lights include an integrated high-pulse driver for complete LED light control.
Continuous Operation Lights stay on continuously.
Multi-Drive™ Combines continuous operation and OverDrive™ strobe (high-pulse operation) mode into one easy-to-use light.
Built-in Driver The built-in driver allows 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.*
Check Part Number section to see if **this light is available in SWIR wavelengths.*