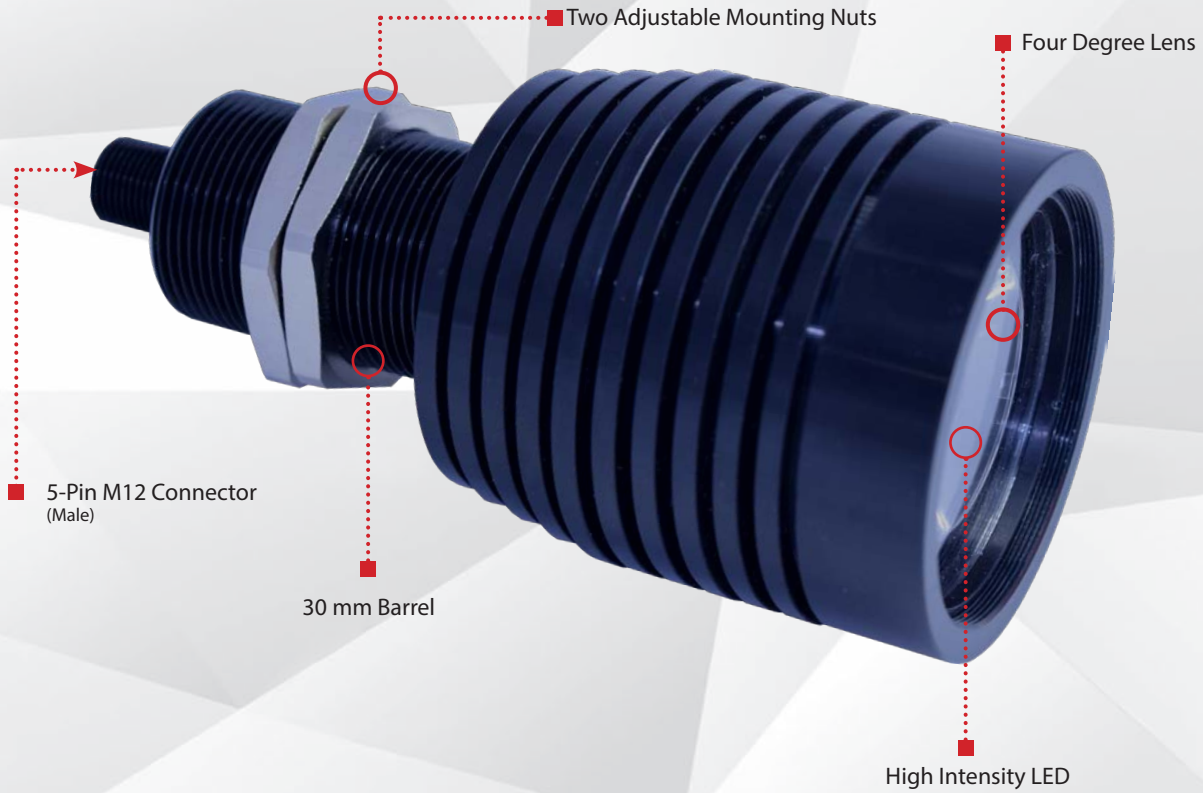
smart vision lights

ODSX30 (N4) PROX SERIES SPOT LIGHT

LONG DISTANCE | OVERDRIVE™

PRODUCT DATA SHEET



OverDRIVE™

Warranty	Compliant	Compliant	Rated	Connector
10 YEAR	IEC 62471	CE RoHS	IP 50	5 PIN M12

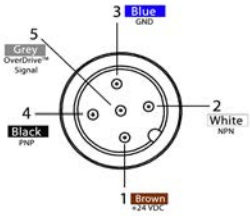
PRODUCT HIGHLIGHTS

- ✓ OverDriveTM — Up to 2.5 times brighter than a standard SX30 (N4) Prox Light
- ✓ Narrow, 4 degree lens allows for a long, tightly focused beam of light
- ✓ Built-in driver, no external wiring needed
- ✓ PNP and NPN strobe input
- ✓ 5-pin M12 quick connect

PRODUCT SPECIFICATIONS

Electrical Input	24 V DC +/- 5%
Input Current	Max. 0.5 A
Wattage	Max. 12 W
Strobe Input	PNP > +4 V DC or greater to activate | NPN > GND (<1 V DC) to activate
PNP Line	4 mA @ 4 V DC | 10 mA @ 12 V DC | 20 mA @ 24 V DC
NPN Line	15 mA @ Ground (0VDC)
Duty Cycle	Max. 10%
Strobe/Pulse Time	Max. 5000 SPS (Strobes Per Second) | Max. Single Pulse = 125 ms
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
Ambient Temperature	-18°–40° C (0°–104° F)
IP Rating	IP50
Weight	~320g

WIRING CONFIGURATION



Pin layout for light (Male Connector)

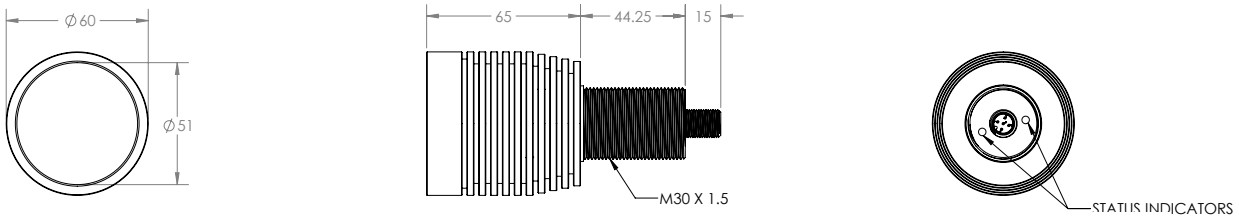
Pins	Function	Signal	Wire Color
1	Power In	+24 V DC	BROWN
2	NPN	Sinking Signal	WHITE
3	GND	Ground	BLUE
4	PNP	Sourcing Signal	BLACK
5	OverDrive™ Signal	1–10 V DC	GREY*

** Some cables use green/yellow for pin 5*

If Analog 1-10 V DC is not used to control light intensity, analog input must be connected to +V DC (24 V DC) – Jumper pin 5 to pin 1

PRODUCT DRAWING

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



RESOURCE CORNER

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

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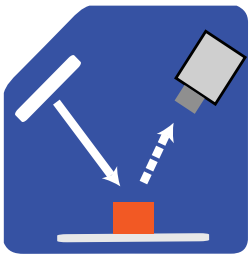
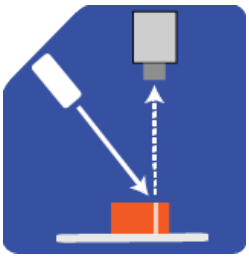
ILLUMINATION

ODSX30 (N4) series of Linear Lights works best for:



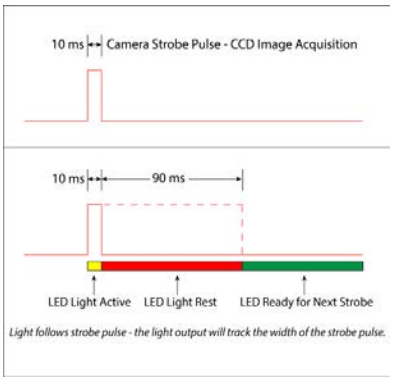
Bright Field



Projector

DUTY CYCLE (OVERDRIVE™ MODE ONLY)

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

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

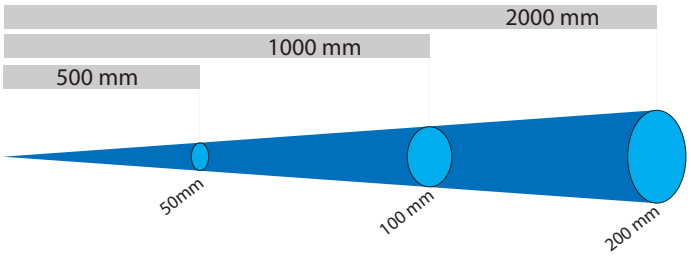
Rest Time is 90 ms for 10 ms Strobe Time

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

LIGHT PATTERNS

Smart Vision Lights recommends the ODSX30 (N4) be used at a working distance between 500 mm to 4000 mm.

Illumination measurement taken on White Light – 6500 K



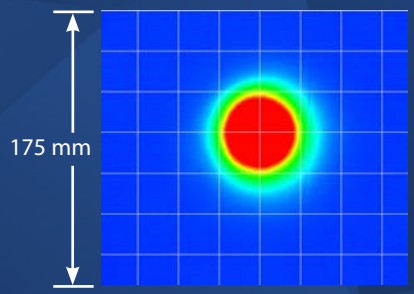
LIGHTING PATTERN FOR THE ODSX30 (N4) **with 4° (narrow) Lenses**

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
500 mm (19.7″)	50 mm (~2″)
1000 mm (39.4″)	100 mm (~3.9″)
2000 mm (78.8″)	200 mm (~7.8″)

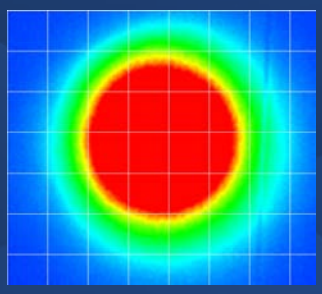
Typical Output Preformance	Illumination (Lux)
Distance = 500 mm	125,000
Illumination measurement taken on White Lights – 6500K	

The ODSX30 (N4) produces a uniform light pattern.

(Grid set to 25 mm x 25 mm)



Working Distance: 500 mm



Working Distance: 1000 mm

PART NUMBER

ODSX30 – □□□ – N4

COLOR:

WHI 470 505 530 625 850 940

Part Number Examples:

ODSX30-625-N4 ODSX30, 625 Red Wavelength, Narrow 4 Degree Lens

Additional wavelengths options available upon request.
UV wavelengths not available.

SWIR SHORT WAVE INFRARED

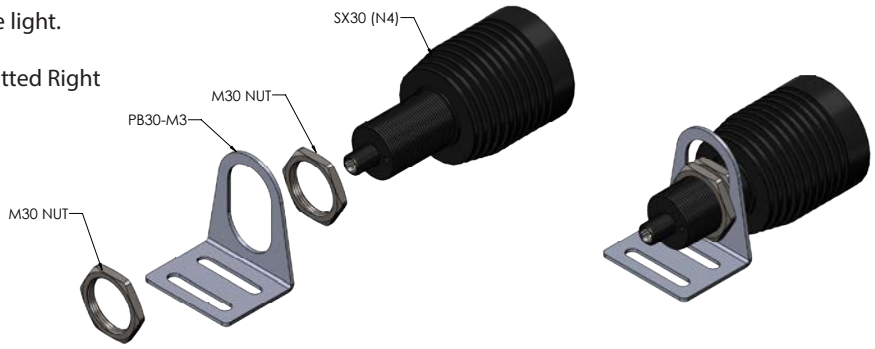
This light is available in our SWIR LEDs
(1050 nm, 1200 nm, 1300 nm, 1450 nm, 1550 nm)

MOUNTING

Two M30 nuts for mounting are included with the light.

Example of the ODSX30 (N4) shown using the Slotted Right Angle mount (**Part Number: PB30-M3**).

See accessories for additional mounting options.



EYE SAFETY

SMART VISION LIGHTS IEC 62471 COMPLIANT

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.

ACCESSORIES

Power Cables

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

Mount

Description	Part Number
Swivel Mount	PB30-M1

Mount

Description	Part Number
Slotted Block Mount	PB30-M2

Mount

Description	Part Number
Slotted Right Angle	PB30-M3

Mount

Description	Part Number
Blot-on Block Mount	PB30-M6

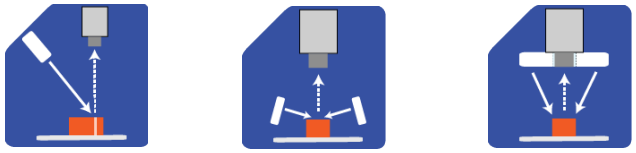
GLOSSARY

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

TERMINOLOGY

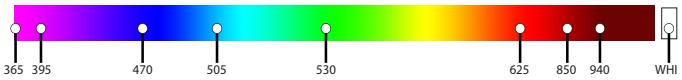
OverDrive™ Lights include an integrated high-pulse driver for complete LED light control. OverDrive™ light part numbers start with OD.
Continuous Operation Light stays on continuously.
Multi-Drive™ Combines continuous operation and OverDrive™ strobe (high-pulse operation) mode into one easy-to-use light.
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.
Diffusers Used to widen the angle of light emission, reduce reflections, and increase uniformity.

TYPES OF ILLUMINATION



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.