smart vision lights

ODDM-3XT COGNEX LIGHT MODULE

OVERDRIVE™ | DATAMAN

PRODUCT DATA SHEET

OverDRIVE™

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

PRODUCT HIGHLIGHTS

- Mounts directly to multiple Cognex cameras
- Supports Laser Aimer accessory
- Powered Directly from Cognex DataMan camera's external light control
- Standard T-Slots for mounting

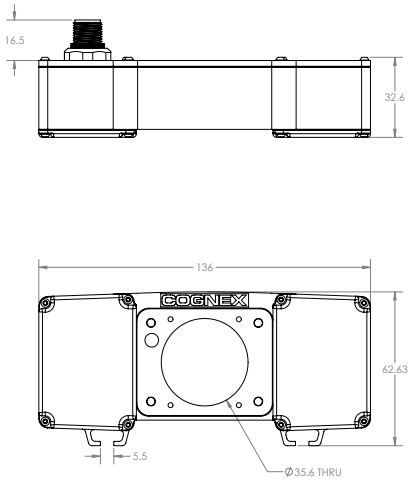
PRODUCT SPECIFICATIONS

Electrical Input	Powered by Cognex camera
Input Current	Max. .5 A (Average draw from Cognex camera)
Wattage	Max. 18 W
Strobe Input	Supplied by Cognex Camera
Strobe/Pulse Time	Specified by Cognex camera
Connection	5-pin M12 connector
Ambient Temperature	-18º–40º C (0º–104º F)
IP Rating	IP65
Weight	~240g
Compliances	CE, RoHS, IEC 62471

WIRING CONFIGURATION

Direct connect to Cognex DataMan camera.

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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smartvisionlights.com
techsupport@smartvisionlights.com
Open: Monday – Friday | 8am–5pm ET

LIGHT PATTERNS

Smart Vision Lights recommends the ODDM-3XT be used at a working distance between 300 mm to 3000 mm.

LIGHTING PATTERN FOR THE ODDM-3XT **with Standard 16° Lenses**

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
500 mm (19.7″)	200 mm (~7.9″) H x 200 mm (~7.9″) V
1000 mm (39.4″)	400 mm (~15.7″) H x 400 mm (~15.7″) V
2000 mm (78.8″)	800 mm (~31.5″) H x 800 mm (~31.5″) V

Typical Output Performance	Illumination (Lux)
Distance = 500 mm	46,400
Illumination measurement taken on White Lights - 6500K	

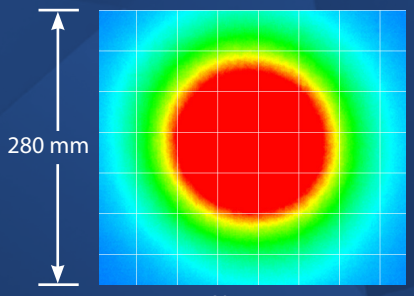
LIGHTING PATTERN FOR THE ODDM-3XT **with Wide 30° Lenses**

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
500 mm (19.7″)	250 mm (~9.8″) H x 250 mm (~9.8″) V
1000 mm (39.4″)	500 mm (~19.7″) H x 500 mm (~19.7″) V
2000 mm (78.8″)	1000 mm (~39.4″) H x 1000 mm (~43.4″) V

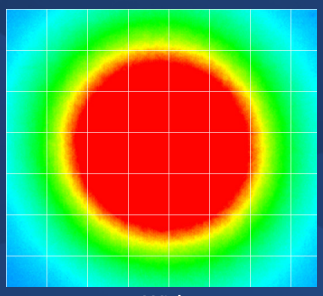
Typical Output Performance	Illumination (Lux)
Distance = 500 mm	20,000
Illumination measurement taken on White Lights - 6500K	

The ODDM-3XT Linear Light produces a uniform light pattern.

Working Distance = 500 mm Grid set to 40 mm x 40 mm



Narrow



Wide

PART NUMBER

ODDM-3XT – □□□ – □

COLOR:

WHI | 470 | 625 | 850

LENS:

Leave blank for standard (Narrow)

W = Wide

Part Number Examples:

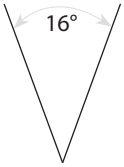
ODDM-3XT-625	ODDM-3XT, 625 Red Wavelength, Standard (Narrow) Lenses
ODDM-3XT-WHI-W	ODDM-3XT, White, Wide Lenses

Additional wavelengths and lens options available upon request

STANDARD LENS OPTICS

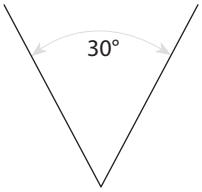
STANDARD (Narrow)

Standard lenses create a narrower beam of illumination. They can be used when long working distances are needed. Standard are 16° angle lenses. Minimum distance recommended using is 500 mm.



WIDE (W)

Wide lenses create a large area of illumination. Wide lenses can be used when short working distances are needed. Wide are 30° angle lenses. Minimum distance recommended using is 300 mm.



EYE SAFETY

SMART VISION LIGHTS IEC 62471 COMPLIANT

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 eyes. Safe for most applications except prolonged exposure. Applicable for wavelengths: 470, and WHI.

When to Use a Linear Polarizers?

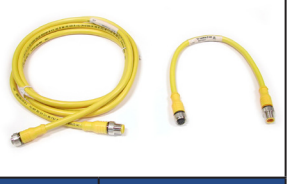
Polarizing filters can reduce reflections on specular surfaces.

A Linear Polarizer has a typical transmission of 38% while blocking 62% of the light not in the polarization plane.

WARNING: Running a light in continuous operation while using a standard polarizer with certain wavelengths (ex. white, blue) may result in burning of the polarizer.

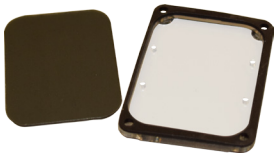
ACCESSORIES

Jumper Cables (Daisy Chain)



Lengths	Part Number
300 mm	5PM12-J300

Linear Polarizer



Description	Part Number
Linear Polarizer Kit	ODDM3XT-LPIKIT-FI

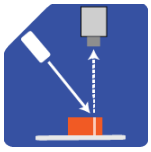
GLOSSARY

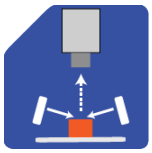
This glossary covers all Smart Vision Lights product families; some content in this section may not apply to this specific light.

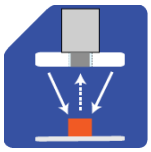
TERMINOLOGY

OverDrive™ Lights include an integrated high-pulse driver for complete LED light control. OverDrive™ light part numbers start with OD.
Continuous Operation Lights 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.

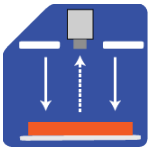
TYPES OF ILLUMINATION

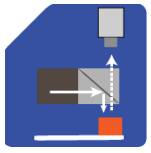

Projector

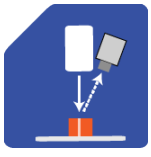

Dark Field

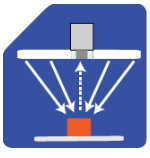

Radial

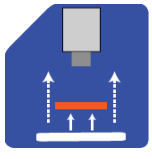

Bright Field


Direct


Axial

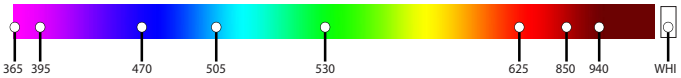

Line


Diffuse Panel


Backlight

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.