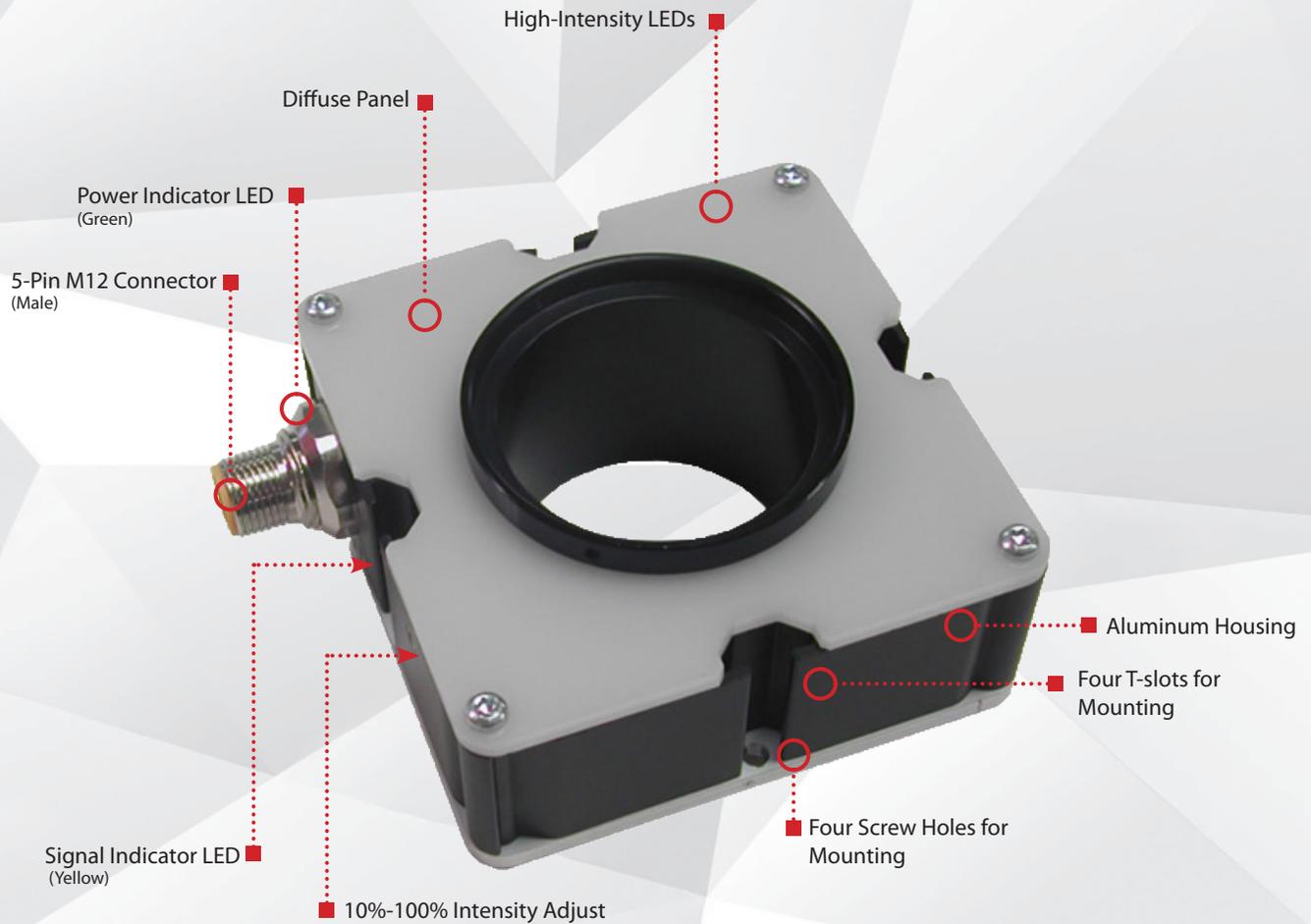


P R O D U C T D A T A S H E E T



Warranty
10
YEAR

Compliant
IEC
62471

Compliant
CE
RoHS

Rated
IP
50

Connector
5-PIN
M12

PRODUCT HIGHLIGHTS

- ✓ T-slot for mounting
- ✓ Conversion adapters for different cameras available
- ✓ PNP and NPN trigger input signal
- ✓ Diffuse lens is factory installed

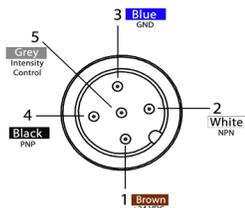
PRODUCT DESCRIPTION

The RD80 is an all-around durable light. Its simple plug-and-play 5-pin M12 connector is easy to use. The RD80 has an optimal working distance between 100mm and 400mm and will operate with either a NPN or a PNP signal and runs on an industry standard 24VDC. The 10%–100% intensity control gives users full control over light output. A standard 42 mm inner hole diameter allows for use with nearly all camera systems with available step-up and step-down conversion kit adapters.

PRODUCT SPECIFICATIONS

Electrical Input	24VDC +/-5%
Input Current	Max. 350 mA
Wattage	Max. 8.4W
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)
Yellow Indicator LED	LED Strobe Indicator ON = Light Active
Green Indicator LED	ON = Power
Continuous Mode	NPN can be tied to ground OR PNP can be tied to 24VDC (not both)
Potentiometer	270° turn pot — intensity control of 10%–100%. Turn clockwise to increases intensity.
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	~183 g
Compliances	CE, RoHS, IEC 62471
Warranty	10 years. For complete warranty information, visit smartvisionlights.com/warranty .

WIRING CONFIGURATION



Pin layout for light (Male Connector)

Pin	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 pin 5

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

For continuous mode: Tie PNP (pin 4) can be tied to +24VDC (pin 1) **or** tie NPN (pin 2) can be tied to Ground (pin 3).

NOTICE

If Analog 1–10VDC is not used to control light intensity, analog input must be connected to +VDC (24VDC) — jumper pin 5 to pin 1.

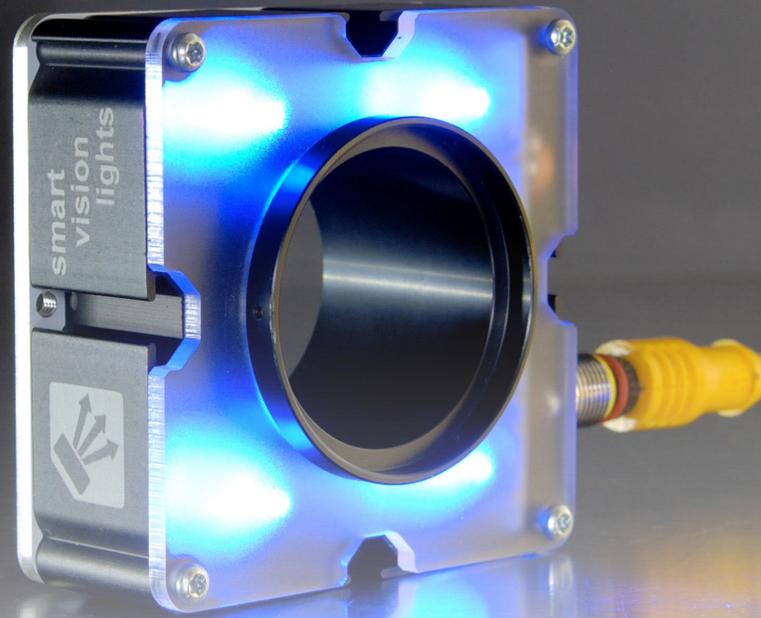
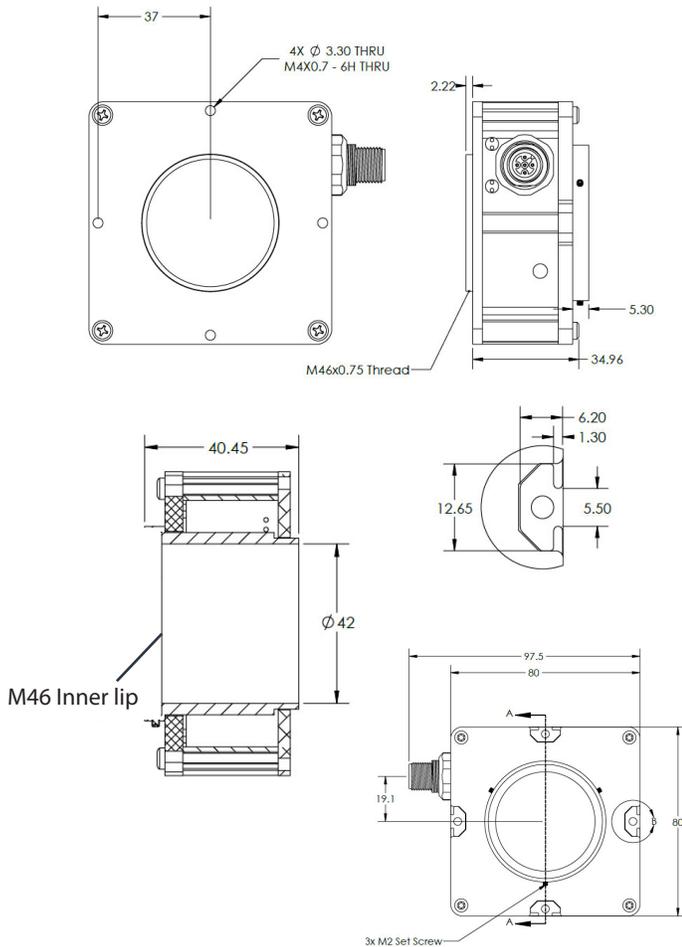


RESOURCE CORNER

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

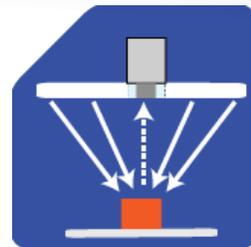
PRODUCT DRAWING

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



ILLUMINATION

RD80 Series of Ring Lights works best for:



Diffuse

EYE SAFETY

According to IEC 62471:2006. Full documentation available 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 eyes. Safe for most applications except prolonged exposure. Applicable for wavelengths 470, 505, 530, and WHI.



PART NUMBER

RD80 –



Part Number Example:

RD80-625 RD80, 625 Red Wavelength,
Standard (Wide) Lens

Additional wavelengths options available upon request.

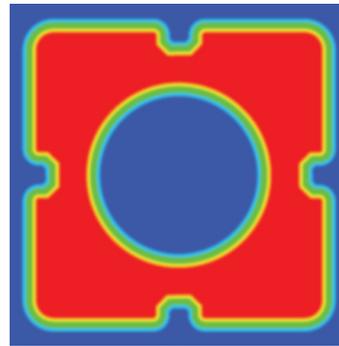
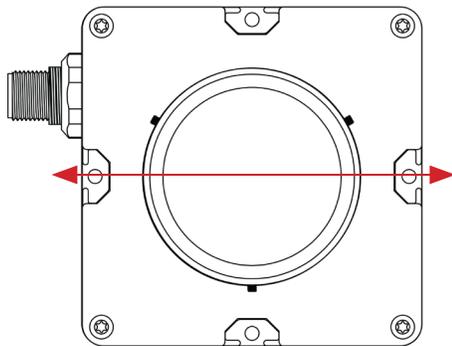


OPTICAL PERFORMANCE

The RD80 offers a very diffuse light pattern. Smart Vision Lights recommends using the RD80 at a working distance between 100 mm and 400 mm.

OPTICAL PERFORMANCE FOR THE RD80

Rating	Illumination (Lux)
Average Intensity Rating	20,000
<i>Illuminance measurement taken at surface of RD80</i>	



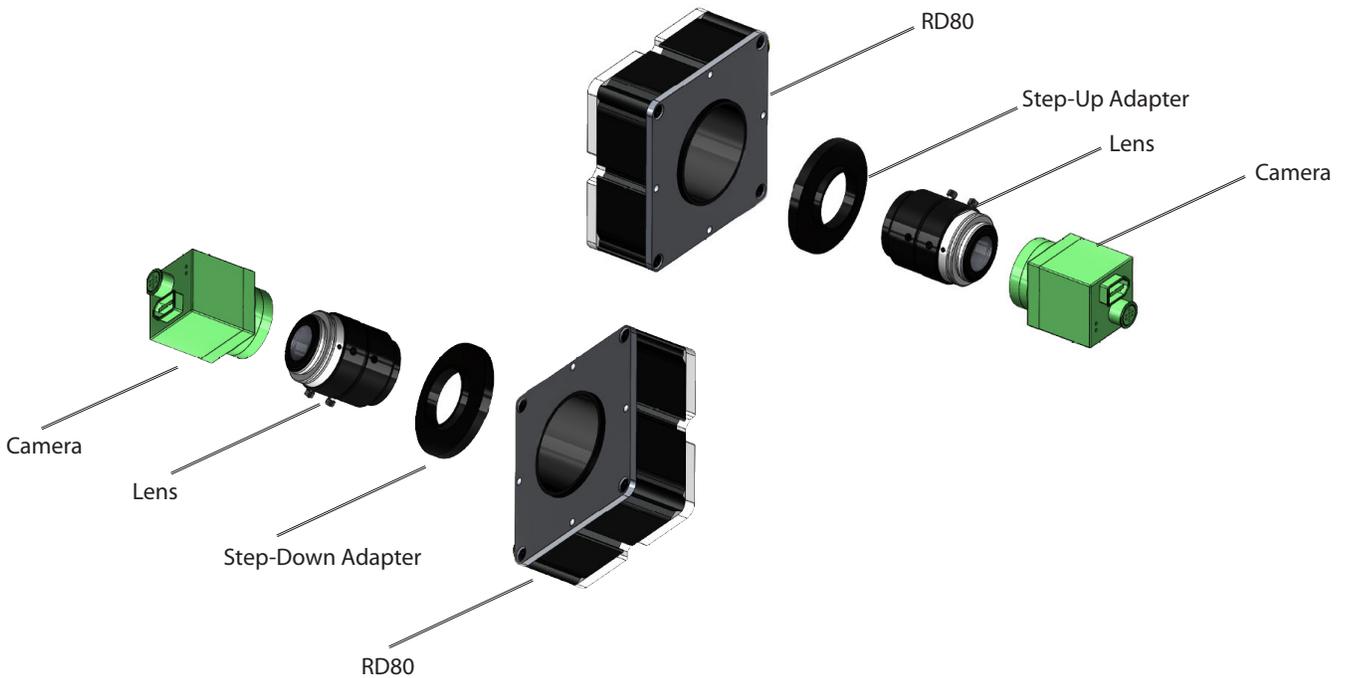


STEP-UP/STEP-DOWN ADAPTER KITS

Step-Up/Step-Down Adapter Kits allow the M46 thread on ring lights to be mounted directly to the threads found on the front-end of most popular lenses.

Step-Up Adapters allow for mounting a lens that is smaller in diameter to an EZ Mount Ring Light, while Step-Down Adapters allow for mounting a larger lens to an EZ Mount Ring Light.

These kits include: a set of screws and a hex wrench.



STEP-UP/STEP-DOWN ADAPTER KITS PART NUMBERS

STEP-DOWN ADAPTER

SD- - 46

LENS THREAD SIZE RING LIGHT THREAD SIZE

49
52
55
58
62
67
72

STEP-UP ADAPTER

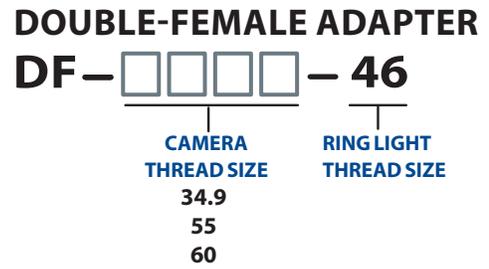
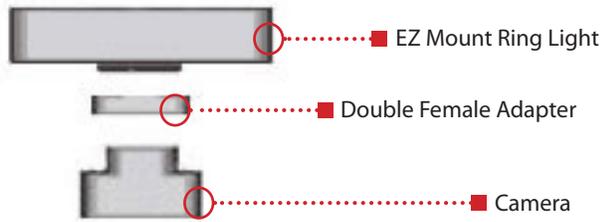
SU- - 46

LENS THREAD SIZE RING LIGHT THREAD SIZE

25.5
27
30.5
34
35.5
37
39
40.5
43

CAMERA MOUNTING ADAPTERS

When mounting a camera directly on to an EZ Mount Ring Light, a Double Female (DF) threaded camera adapter is used.



*When mounting an EZ Mount Ring Light, a double-female adapter is used.

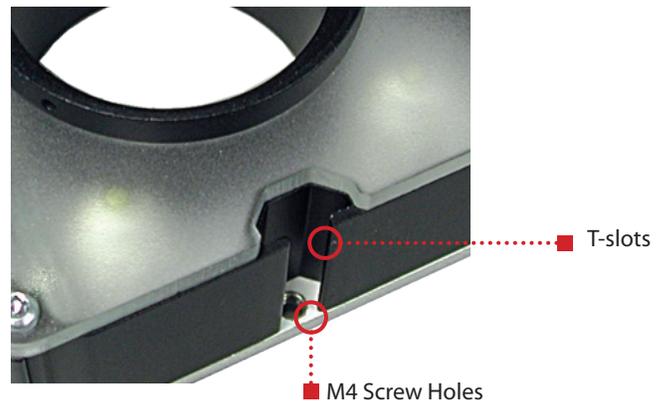
MOUNTING

Mounting options include four T-slots and four M4 threaded holes on the RD80 EZ Mount ring light.

Optional Mounting Hardware:

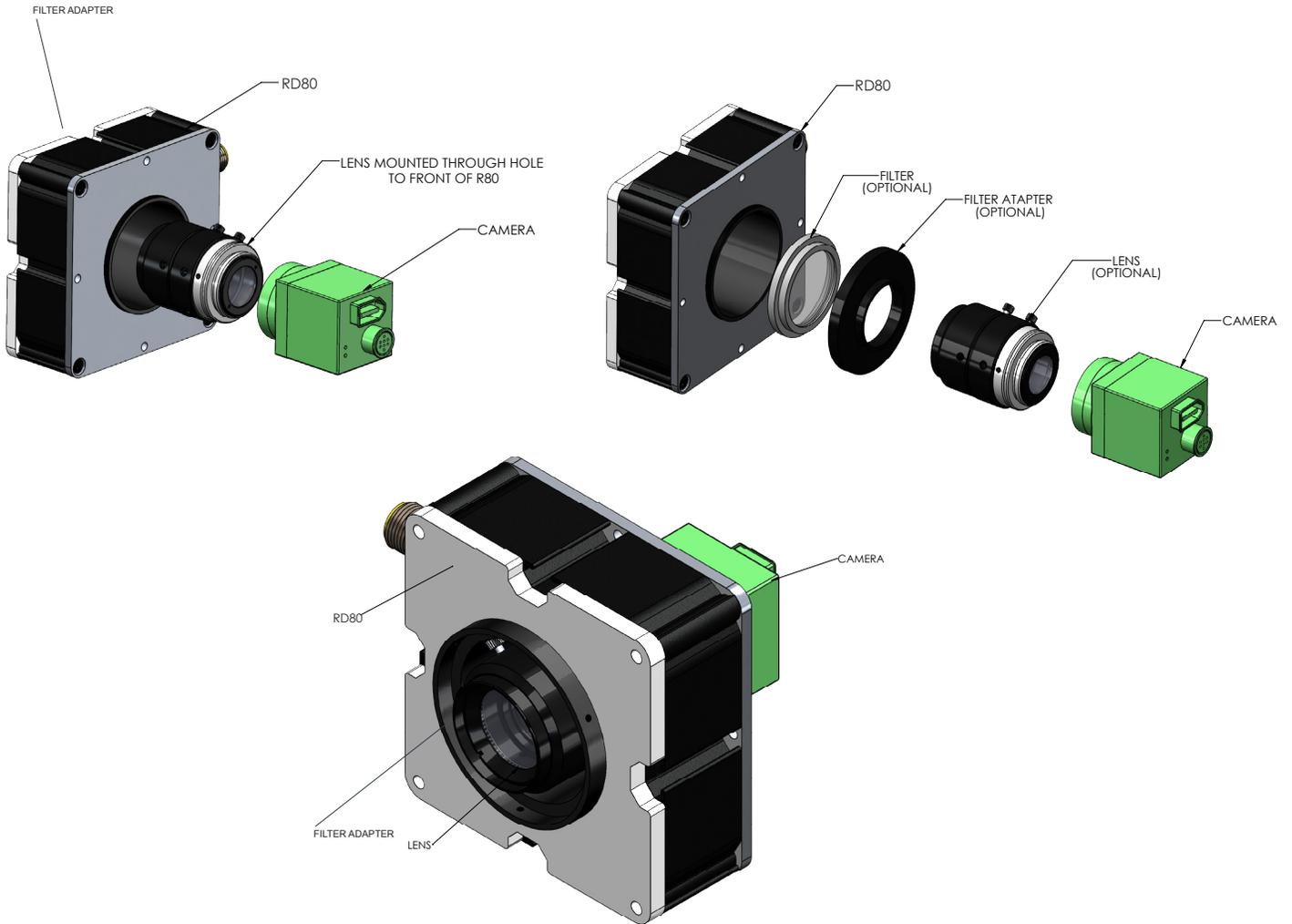
T-slots = M5 x 0.8 mm T-nut

Threaded screw holes = M4 screws



CAMERA MOUNTING EXAMPLES

The 42 mm threaded opening on the back of the RD80 allows for easy mounting of a camera, filter, or step-up/step-down kit.





ACCESSORIES

Step-Up Kits



Lens Thread Size	Part Number
25.5 mm	SU25.5-46
27 mm	SU27-46
30.5 mm	SU30.5-46
34 mm	SU34-46
35.5 mm	SU35.5-46
37 mm	SU37-46
39 mm	SU39-46
40.5 mm	SU40.5-46
43 mm	SU46-46

Step-Down Kits



Lens Thread Size	Part Number
49 mm	SD49-46
52 mm	SD52-46
55 mm	SD55-46
58 mm	SD58-46
62 mm	SD62-46
67 mm	SD67-46
72 mm	SD72-46

Camera Adapters



Camera Thread Size	Part Number
55 mm	DF55-46
60 mm	DF60-46
34.9 mm	DF34.9-46

Power Cables



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

Variable Control Pot



Description	Part Number
Controls the intensity of the light	IVP-C1

Power Adapters *



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

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



GLOSSARY

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

TERMINOLOGY

OverDrive™ Light includes an integrated high-pulse driver for complete LED light control.

Continuous Operation Light stays on continuously.

Multi-Drive™ Combines continuous operation and OverDrive™ strobe (high-pulse operation) mode into one easy-to-use light.

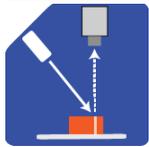
Built-In Driver The built-in driver allows full function without the need for an external controller.

Camera to Light Connect the light directly to the camera, without the need for additional controllers or equipment.

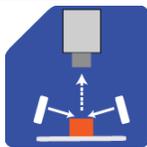
Polarizers Filters that reduce reflections on specular surfaces.

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

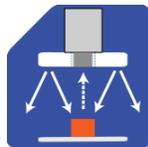
TYPES OF ILLUMINATION



Projector



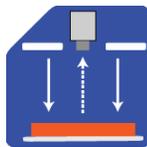
Dark Field



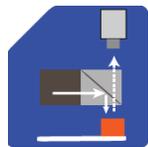
Radial



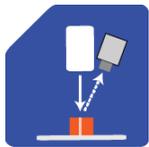
Bright Field



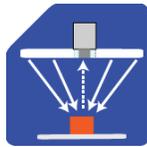
Direct



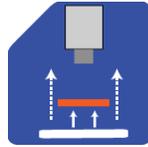
Axial



Line



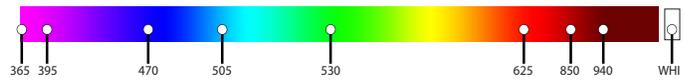
Diffuse Panel



Backlight

COLOR/WAVELENGTHS LEGEND

Wavelength 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.*

*Check Part Number section to see if **this light** is available in SWIR wavelengths.