

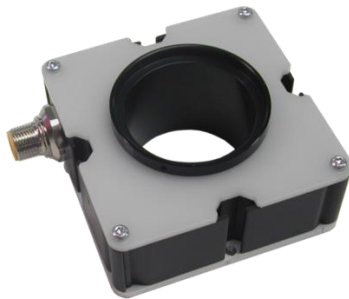


## product introduction

The all metal construction of the Ring Light Series of lights provides a small particle resistant and all around durable light. Its simple plug and play 5 Pin M12 connector provides ease of use while allowing for full control. The ODR80 operates with either an NPN or a PNP signal and runs on an industry standard 24 VDC. The 0-10 VDC intensity control assists in gaining full control of the light output. The provided diffuse lens breaks up light into a more diffuse and even pattern - great for inspecting metallic or semi-metallic materials. A standard 42 mm inner hole diameter allows for use with nearly all camera systems with available step-up and step-down conversion kits adapters.



## product features



- 4-5 times Brighter Than Standard High Current LEDs
- SafeStrobe Technology
- T-Slot For Mounting
- Conversion Adapters for Different Cameras
- PNP And NPN Strobe Input
- Diffuse Acrylic Backlight Lens
- Continuous Operation or Strobe Mode
- Dimmable Via Built In Potentiometer



## product specifications

<b>Electrical Input</b>	24 VDC +/- 5%
<b>Current</b>	Max. 2A draw during strobe – Max Avg. 200mA
<b>Wattage</b>	Max. 48W during strobe – Max. Avg. 4.8W
<b>Strobe Input</b>	PNP ▶ +4VDC or greater to activate.   NPN ▶ GND (<1VDC) to activate
<b>PNP Line</b>	3.7mA @ 3VDC   6.2mA @ 5VDC   12.6mA @ 10VDC   30.4mA @ 24 VDC
<b>NPN Line</b>	22mA @ Common (0VDC)
<b>Yellow Indicator LED</b>	LED Strobe Indicator ON = Light Active
<b>Green Indicator LED</b>	ON = Power
<b>Duty Cycle</b>	Max. 10%
<b>Strobe/Pulse Time</b>	Max. 5000 SPS (Strobes Per Second)   Max. Single Pulse = 125ms
<b>Potentiometer</b>	Intensity control of 10% to 100% Clockwise increases intensity
<b>Analog Intensity</b>	The output is adjustable from 10 -100% of brightness by a 0 -10 VDC signal
<b>Connection</b>	5 pin M12 connector
<b>Lifespan</b>	100,000 hrs
<b>Ambient Temp.</b>	-20° - 50° C (-4° - 122° F)
<b>IP Rating</b>	IP50
<b>Weight</b>	~183g
<b>Certification</b>	CE and RoHS certified
<b>IEC 62471 Rating</b>	See page 4



## product number key

# ODRD80 – XXX –» Part Number Key

Product Family:  
Ring Light  
ODRD80

Color:  
470 – Blue  
505 – Cyan  
530- Green  
625 – Red  
850/940 – IR  
WHI - White

CE and RoHS Compliant



## warnings



### Attention

Please note that the power requirements are up to 300mA at 24VDC. Failure to supply light with up to 300mA can result in non-repeatable lighting. Contact Smart Vision Lights for more information.



## wiring configuration

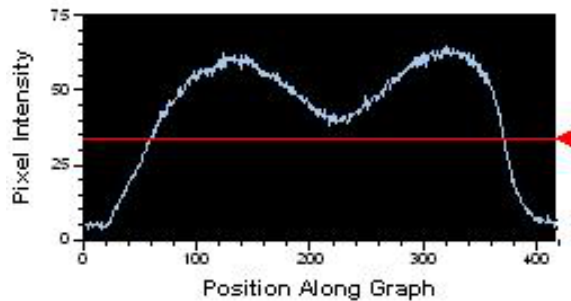
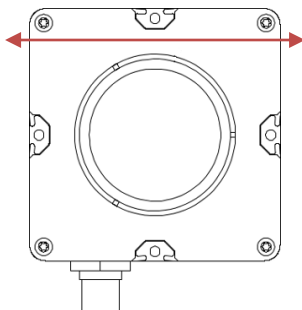
If Analog 0-10 VDC is not used to control light intensity;  
+VDC (24VDC) must be connected to Analog Input - Jumper pin 5 to pin 1

	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	0-10VDC	GREY †

† Some cables use green with yellow stripe for 0-10V adjustment



## optical performance



Average Intensity

20,000 lux

The ODRD80 offers a diffuse light pattern at a defined working distance of greater than ~10". The Pixel Graph representation shows a steep drop off in intensity outside of the active area with a diffuse light pattern inside.



## mounting & accessories

Standard industrial T-slots on each side accept T-nuts



Front mounting of Lens to Ring Light



Rear mounting of Lens to Ring Light



## adapter kit

### Standard Adapter Kit – Part # SU46-25.5-27

Adapter Kit includes 2 step up rings (25.5 and 27), 6 set screws and hex tool. 6 set screws – 3 for mounting step up ring to light and 3 additional for lens. Some locking thumbscrews may prevent the lens from fitting through the center of the R80, extra low-profile replacement set screws are included, allowing the protruding thumbscrews to be removed.



### Step Up Adapter Kits

Step Up Adapter Kits includes step up rings, 6 set screws and hex tool. Lenses can be mounted to front or back of ring light. Filters can also be installed.



M46 step-up	Lens thread size	Part #
46-	25.5	SU46-25.5/27
46-	27	SU46-25.5/27
46-	30.5	SU46-30.5
46-	34	SU46-34
46-	37	SU46-37
46-	37.5	SU46-37.5
46-	39	SU46-39
46-	40.5	SU46-40.5
46-	43	SU46-43

### Step Down Adapter Rings

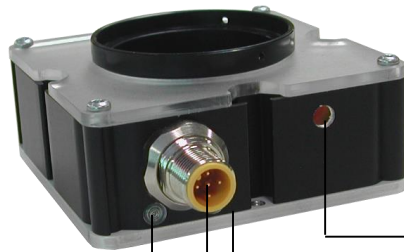
Step Down rings mount large lenses to light. Step Down rings mount lenses to back of ring light. Filters can also be installed.



M46 step-down	Lens thread size	Part #
46-	49	SD46-49
46-	52	SD46-52
46-	55	SD46-55
46-	58	SD46-58
46-	62	SD46-62
46-	67	SD46-67
46-	72	SD46-72



## identification



- 0-10 VDC Intensity Adjust
- Signal Indicator LED (Yellow)
- Power Input Plug
- Power Indicator LED (Green)



## risk group

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.