PRODUCT DATA SHEET

ODR130 | **RING LIGHT** | OverDrive

product introduction

The ODR130 Series of brick light features an Overdrive driver with NPN or PNP signal options. 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 allows for ease of use while allowing for full control. The 0-10 VDC intensity control assists in gaining full control of the 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 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
- OverDrive/Strobe only
- Standard with wide lenses
- Up to 2000 strobes per second
- Maximum Strobe Time 125mS
- Eight, 1mm² Die High Current LEDs

product specifications

Electrical Input	24 VDC +/- 5%
Current	Max. 4A draw during strobe – Max Average 400mA
Wattage	Max. 9.6W
Strobe Input	PNP ► +4VDC or greater to activate. | NPN ► GND (<1VDC) to activate
PNP Line	3.7mA @ 3VDC | 6.2mA @ 5VDC | 12.6mA @ 10VDC | 30.4mA @ 24 VDC
NPN Line	22mA @ Common (0VDC)
Duty Cycle	Max. 10%
Strobe/Pulse Time	Max. Single Pulse = 125ms
Red Indicator LED	ON = Light Rest (LED inactive) OFF = LED/Light Ready
Green Indicator LED	ON = Power
Potentiometer	10 turn pot - Intensity control of 10% to 100% Clockwise increases intensity
Analog Intensity	The output is adjustable from 0 -100% of brightness by a 0 -10 VDC signal
Connection	5 pin M12 connector
Ambient Temp.	-20º - 50º C (-4º - 122º F)
IP Rating	IP50
Weight	~325g
Certification	CE and RoHS certified
IEC 62471 Rating	See page 4

product number key

ODR130 – XXX – X* —» Part Number Key

Product Family:
Ring Light
ODR130

Color:
365, 395, 470, 505, 530, 625, 850, 940 & WHI (White)

Lenses:
N - Narrow

* Lights come standard with Wide lenses

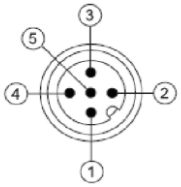
CE and RoHS Compliant

warnings

Attention

Please note that the power requirements are up to 4A at 24VDC. Failure to supply light with up to 4A can result in non-repeatable lighting. Contact Smart Vision Lights for more information.

wiring configuration



1 – 24V
2 – NPN
3 – GND
4 – PNP
5 – 0-10V

Standard M12 mating cable color code:

BROWN
WHITE
BLUE
BLACK
*GRAY (GREEN/YELLOW)

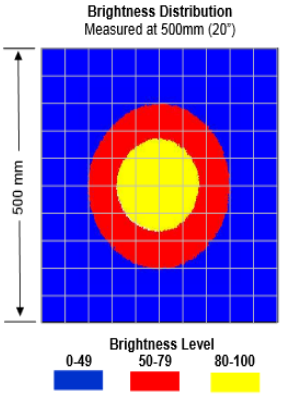
If Analog 0-10 VDC is not used to control light intensity;
+VDC (24VDC) must be connected to Analog Input - Jumper pin 5 to pin 1

PIN	Wire Color	Function	Signal
1	BROWN	Power	+24 VDC
2	WHITE	NPN Strobe	GND for Active ON
3	BLUE	Ground	GND
4	BLACK	PNP Strobe	4VDC to 30VDC for Active ON
5	GREEN	Analog Intensity Control	0-10 VDC

optical performance

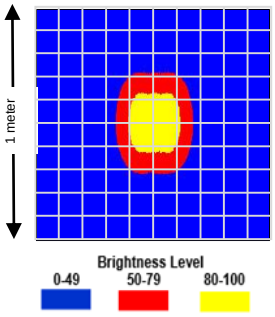
ODR130-XXX

Working Distance mm (inches)	Pattern (80%-100% measured intensity) mm (Inches)
.25m (10")	150mm(~6") D
.5m (20")	250mm(~10") D
.75m (30")	350mm(~14") D
1m (40")	450mm(~18") D
Typical output performance	Illumination (Lux)
Distance = .5 meter	25000
Illumination measurement taken on White Lights – 6500K	



ODR130-XXX-N

Working Distance mm (inches)	Pattern (80%-100% measured intensity) mm (Inches)
.25m (10")	90mm (~3.5")
.5m (20")	120mm (~4.7")
.75m (30")	160mm (~6.3")
1m (40")	220mm (~8.6")
Typical output performance	Illumination (Lux)
Distance = .5 meter	95000
Illumination measurement taken on White Lights – 6500K	



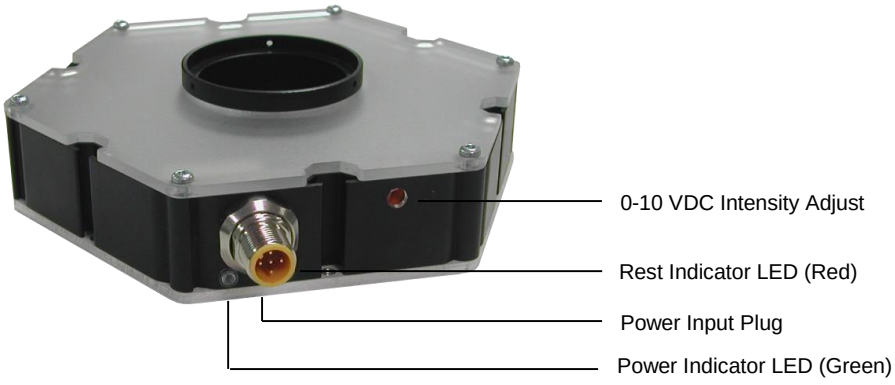
mounting & accessories

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

Front mounting of Lens to Ring Light

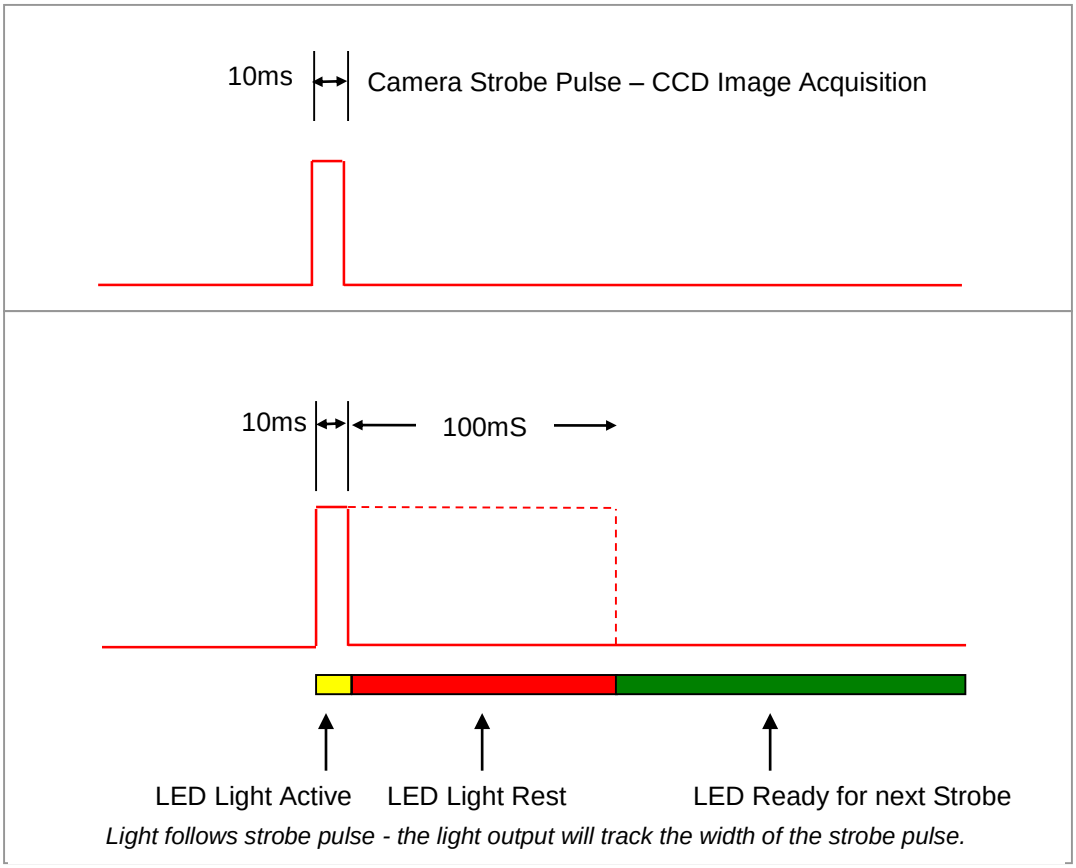
Rear mounting of Lens to Ring Light

identification



Duty Cycle on Performance of Light

All lights are pulse following



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

Duty Cycle (*D*) is defined as the ratio between Strobe Time and Rest Time

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Maximum Duty Cycle for OD Light is 10% = .1

Calculating Rest Time - R_T

$$R_T = \frac{S_T}{D}$$

S_T is the Strobe Time
R_T is the Rest Time
D is Duty Cycle

Example: Camera exposure of 10mS where Strobe Time is 10mS.

$$R_T = \frac{10ms}{.1} = 100mS$$

Rest Time is 100ms for 10ms Strobe Time

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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

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: 395, 470, 505, 530, and WHI.

Notice

Risk Group 1: UV emitted from this product. Minimize exposure to eyes and skin. Use appropriate shielding. Safe for most applications except prolonged exposures.
Applicable for wavelengths: 395

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