

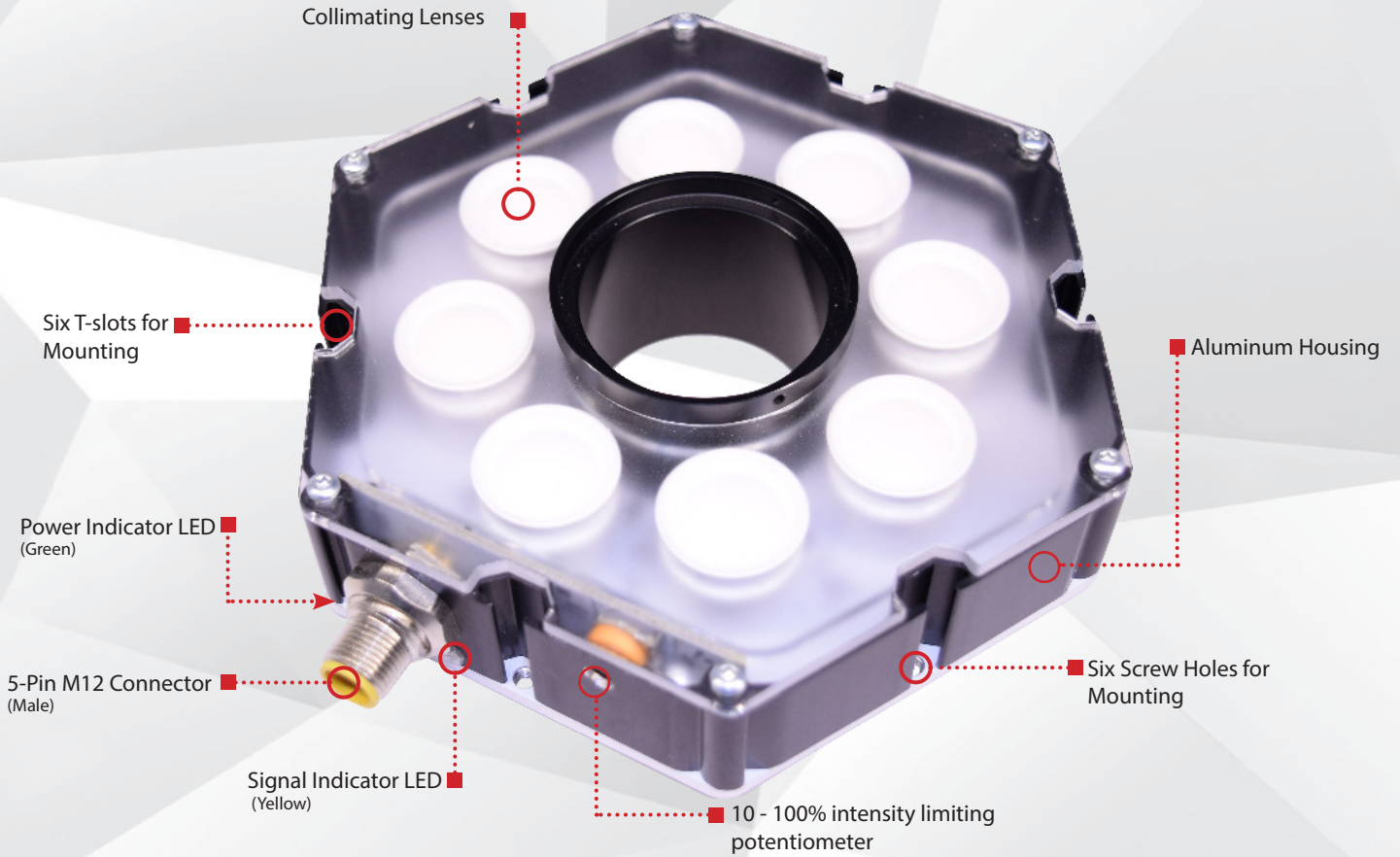


smart
vision lights

RC130 *EZ Mount* RING LIGHT

WIDE UNIFORM PATTERN

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



Warranty
10
YEAR

Tested
IEC
62471

Compliant
CE
RoHS

Rated
IP
50

Connector
5-PIN
M12

PRODUCT HIGHLIGHTS

- ✓ Beam shaping optics project a collimated light pattern
- ✓ Built-in driver
- ✓ PNP and NPN trigger input signal
- ✓ Conversion adapters for different cameras available





PRODUCT INTRODUCTION

The RC130 was designed to produce a large uniform/homogenous light pattern. To achieve this, the RC130 contains special lenses for creating this near collimated light pattern. Its simple plug and play 5-pin M12 connector is easy to use, while allowing for full control. The RC130 operates with either an NPN or a PNP signal and runs on an industry standard 24VDC. The 10%-100% intensity control assists in gaining full control of the lights 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.

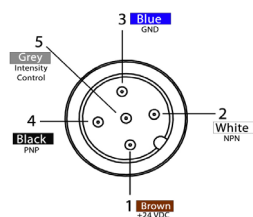


PRODUCT SPECIFICATIONS

Electrical Input	24VDC +/-5%
Input Current	Max. 460mA
Input Power	Max. 11.1W
PNP Trigger	2.8 mA @ 4VDC 8.8 mA @ 12VDC 17.6 mA @ 24VDC
NPN Trigger	14.4 mA @ ground (0VDC)
Trigger Input	PNP > +4 VDC (24 VDC max.) to activate or NPN ≥ GND <1VDC to activate (not both)
Power Indicator	Turns green when powered up
Status Indicator	Strobe indicator will turn red while resting and turn off when ready
Continuous Mode	NPN can be tied to ground OR PNP can be tied to 24VDC (not both)
Intensity Limit	270° turn pot – intensity control of 10%–100%. Turn clockwise to increase intensity limit.
Analog Intensity	The output is adjustable from 10%–100% of intensity limit by a 1 – 10VDC signal. (Jumpering pin 5 to pin 1 will provide maximum intensity.)
Connection	5-pin M12 connector
Operating Temperature	-10° to 40° C (14° to 104° F) RH max 80% non-condensing humidity
Storage Temperature	-20° to 70° C (-4° to 158° F) RH max 80% non-condensing humidity
IP Rating	IP50
Weight	~325g
Compliances	CE, RoHS, IEC-62471
Warranty	UV LEDs have a 2 year warranty, all other LEDs have a 10 year warranty. For complete warranty information, visit smartvisionlights.com/warranty .



WIRING CONFIGURATION



Pin layout for light (Male Connector)

Pins	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).

For proper light function, apply either a PNP or NPN signal, not both.

Failure to supply light with correct input current will result in inconsistent lighting behavior.

(see Product Specifications for requirements)



RESOURCE CORNER

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



PART NUMBER

RC130 —

COLOR:



Part Number Example:

RC130-625 RC130, 625 Red Wavelength,
Standard (Wide) Lenses

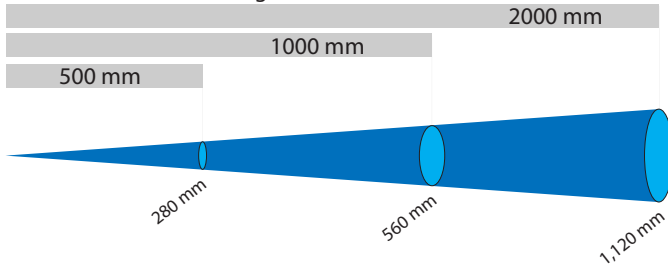
Additional wavelengths options available upon request.



LIGHT PATTERNS

Smart Vision Lights recommends the RC130 be used at a working distance between 300 mm to 4000 mm.

Beam Diameter (White Light) — 5700K



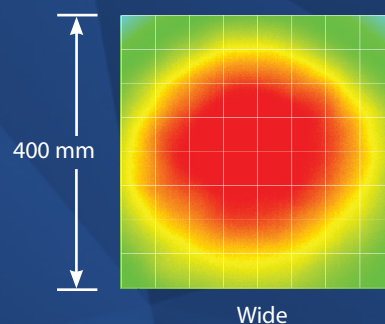
LIGHTING PATTERN FOR THE RC130-XXX

Working Distance mm (inches)	Pattern (80% - 100% measured intensity) mm (inches)
500 mm (19.7")	280 mm (~11.05")
1000 mm (39.4")	560 mm (~22.10")
2000 mm (78.8")	1,120 mm (~44.20")

Typical Output Performance	Illuminance (Lux)
Distance = 500 mm	2500
<i>Illuminance measurement taken on White Lights — 5700K</i>	

The RC130 Ring Light produces a uniform light pattern.

Working Distance = 500 mm Grid set to 50 mm x 50 mm

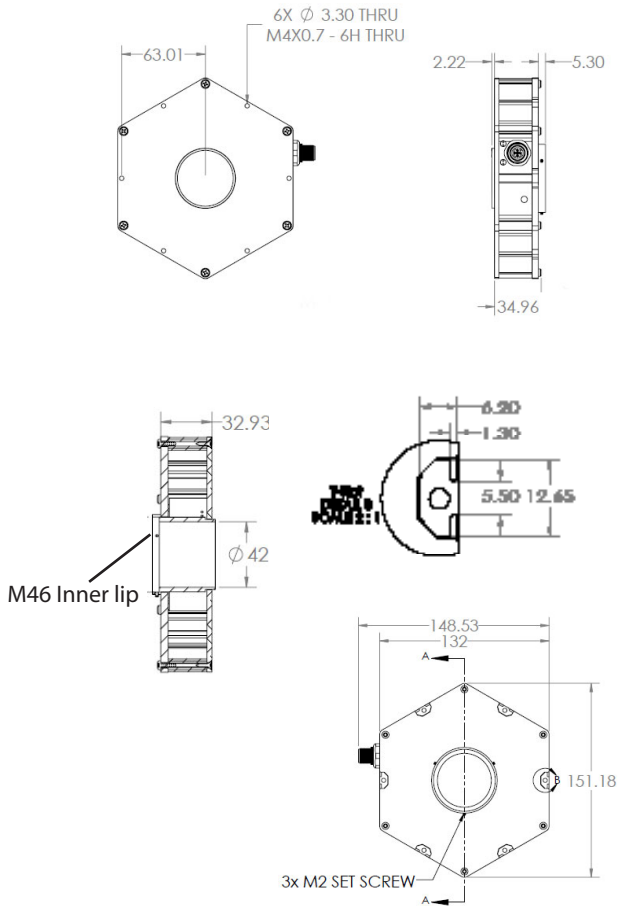


Wide



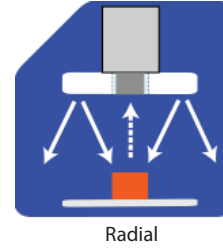
PRODUCT DRAWING

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



ILLUMINATION

RC130 Series of Ring Lights works best for:



EYE SAFETY



According to IEC 62471:2006. Full documentation available upon request with purchase of product.

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.

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 and 395.

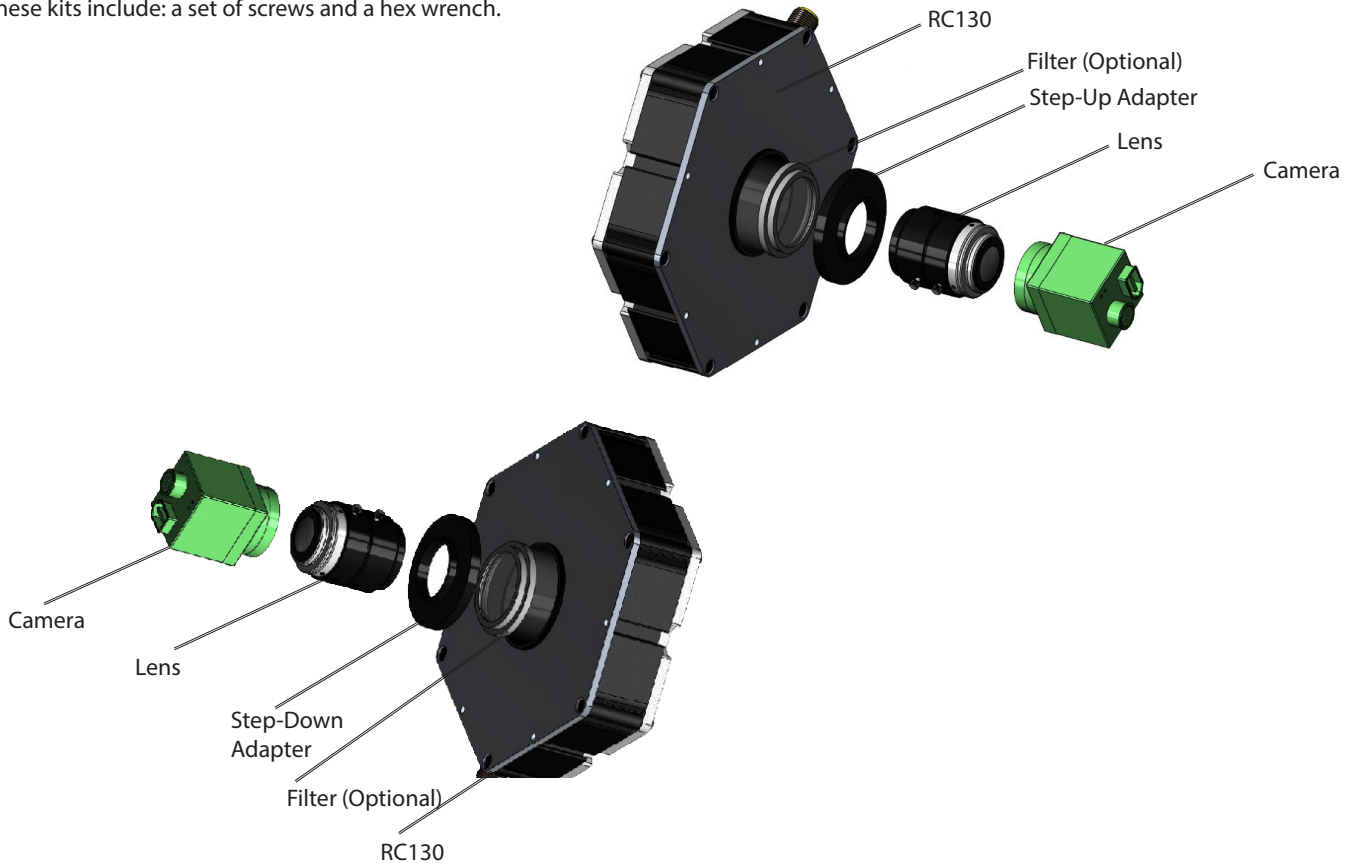


STEP-UP/STEP-DOWN ADAPTER KITS

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 RINGLIGHT THREAD SIZE

- 49
- 52
- 55
- 58
- 62
- 67
- 72

STEP-UP ADAPTER

SU- - 46

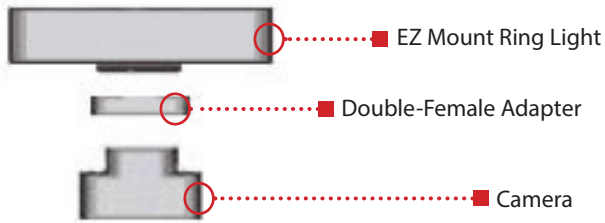
LENS THREAD SIZE RINGLIGHT THREAD SIZE

- 25.5
- 27
- 30.5
- 34
- 35.5
- 37
- 39
- 40.5
- 43

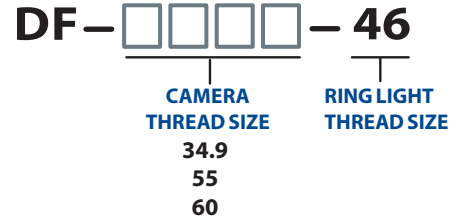


CAMERA MOUNTING ADAPTERS

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



DOUBLE-FEMALE ADAPTER



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



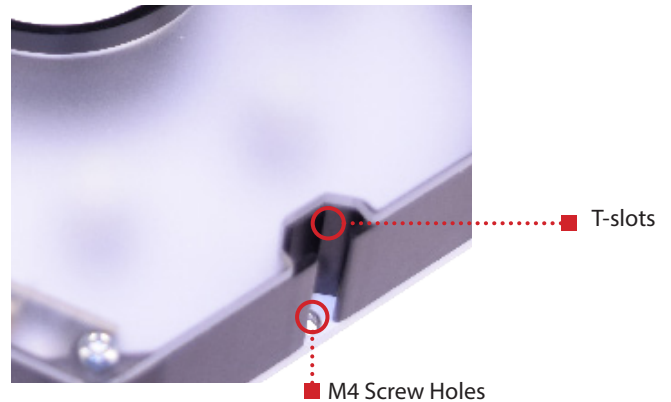
MOUNTING

Mounting options include six T-slots and six M4 threaded holes on the RC130 EZ Mount ring light.

Optional Mounting Hardware:

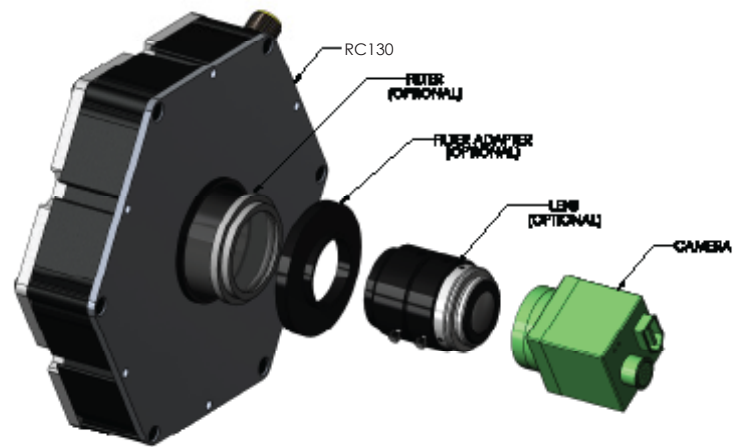
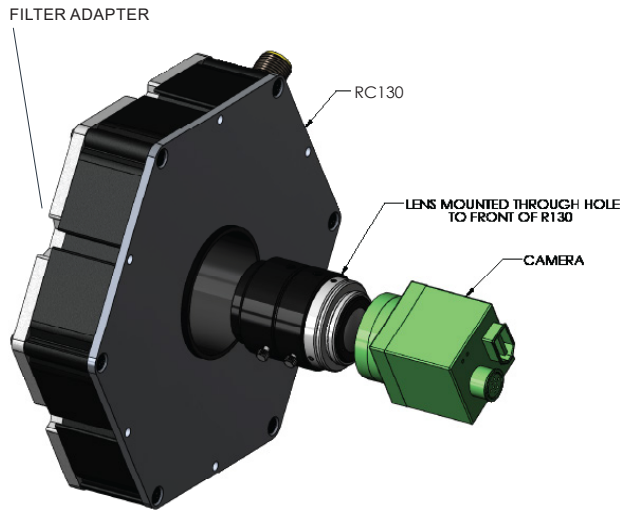
T-Slots = M5 x 0.8 mm T-Nut

Threaded screw Holes = M4 screws





CAMERA MOUNTING EXAMPLES





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
34.5 mm	DF34.5-46

Power Cables



Lengths	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

Camera Mounting Adapter



Description	Part Number
Adapter	BKT0030-KIT



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.

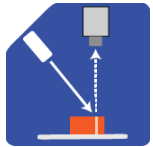
Built-in Driver The built-in driver allows full function without the need of an external controller.

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

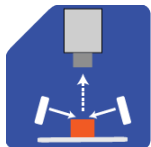
Polarizers Filters that reduce reflections on specular surfaces.

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

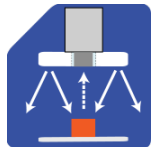
TYPES OF ILLUMINATION



Projector



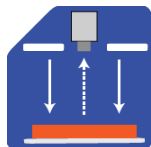
Dark Field



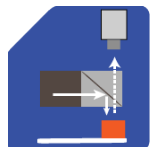
Radial



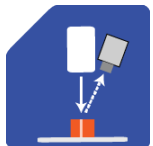
Bright Field



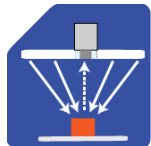
Direct



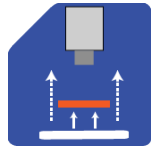
Axial



Line



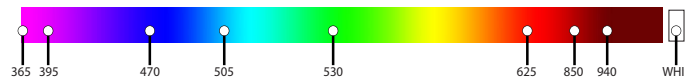
Diffuse Panel



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.