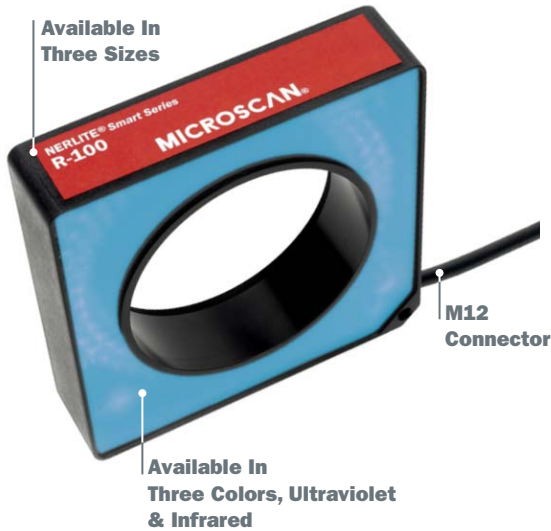


NERLITE® RING LIGHT



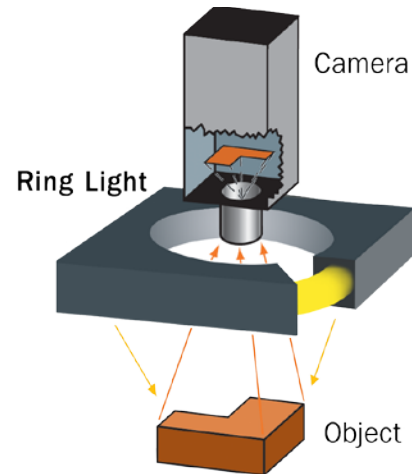
Diffused Surface Lighting Solution

Microscan's Smart Series NERLITE products feature built-in controllers for a complete and easily integrated solution.

Ring lights are a cost-effective, easily integrated solution for illuminating surfaces. As with other incident lighting choices, subtle adjustments to working distance and angle of light delivery can deliver good image contrast for minimal investment. Ring light packaging and mounting advancements emphasize durability and versatility for any diffused surface lighting application.

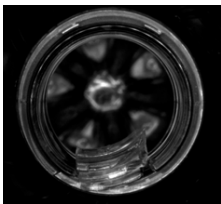
Ring Light: At a Glance

- Smart Series: Built-in controller with adjustable intensity continuous mode and high output strobe mode
- Integrated Pulse Width Modulation (PWM) feature for dimming and on-off control
- Economical and widely-used general purpose designs
- Optional adapters allows easy, direct attachment to a variety of camera lenses
- Optional fresnel lens accessories allow the illumination to be focused at various distances
- Diffuser accessory included

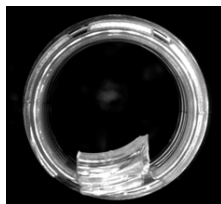


Illumination Example:

Object



Resulting Image



Plastic bottle: Defect on top of a plastic bottle is clearly identified.

Application Examples

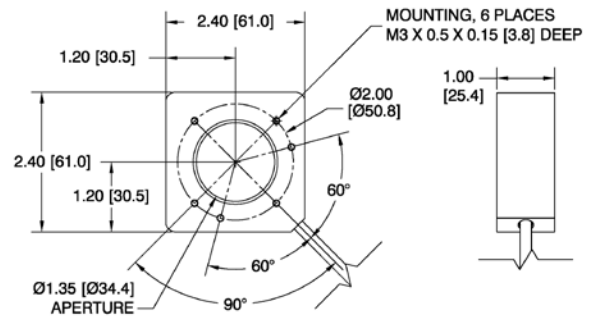
- Illuminate flat, diffused surfaces
- Inspection of circular objects (gaskets, washers)
- Label inspection
- Lab use where interchangeable optics such as diffusers or fresnel (focusing) lenses are desired
- When direct attachment to lens is required

NERLITE® RING LIGHT SPECIFICATIONS AND OPTIONS

R 60

DESCRIPTION	nm/K	CURRENT DRAW 24VDC	mcd		mw	
			CONT.	STROBE	CONT.	STROBE
R-60, Smart Series, Red	623 nm	1.2 A	283759	2958239		
R-60, Smart Series, Blue	470 nm	700 mA	124671	536355		
R-60, Smart Series, White	6700 K	700 mA	305710	1512455		
R-60, Smart Series, Infrared	880 nm	1.0 A			704	5884
R-60, Smart Series, Ultraviolet	375 nm	200 mA			58	424

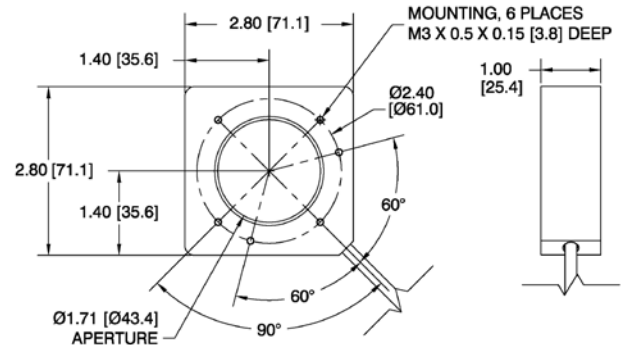
Aperture Diameter: 1.35" (34.4 mm) **Weight:** 4 oz. (113 g)
Dimensions: H 2.40" (61 mm) x W 2.40" (61 mm) x D 1.00" (25.4 mm)



R 70

DESCRIPTION	nm/K	CURRENT DRAW 24VDC	mcd		mw	
			CONT.	STROBE	CONT.	STROBE
R-70, Smart Series, Red	623 nm	1.2 A	349281	3062913		
R-70, Smart Series, Blue	470 nm	850 mA	143217	618814		
R-70, Smart Series, White	6700 K	850 mA	352205	1739631		
R-70, Smart Series, Infrared	880 nm	1.0 A			783	5924
R-70, Smart Series, Ultraviolet	375 nm	230 mA			66	481

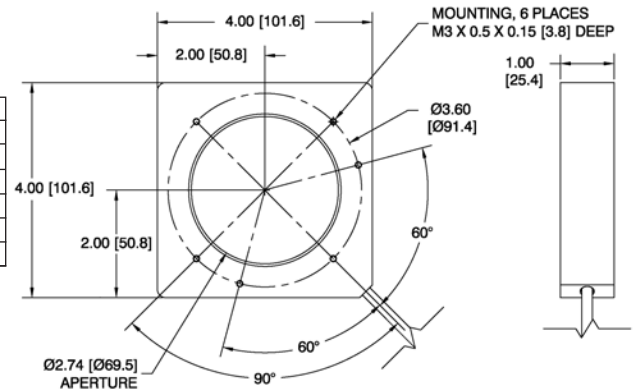
Aperture Diameter: 1.71" (43.4 mm) **Weight:** 5 oz. (136 g)
Dimensions: H 2.80" (71.1 mm) x W 2.80" (71.1 mm) x D 1.00" (25.4 mm)



R 100

DESCRIPTION	nm/K	CURRENT DRAW 24VDC	mcd		mw	
			CONT.	STROBE	CONT.	STROBE
R-100, Smart Series, Red	623 nm	1.7 A	516015	4370388		
R-100, Smart Series, Blue	470 nm	1.1 A	201005	848215		
R-100, Smart Series, White	6700 K	1.1 A	495814	2338577		
R-100, Smart Series, Infrared	880 nm	1.3 A			1105	9236
R-100, Smart Series, Ultraviolet	375 nm	390 mA			108	758

Aperture Diameter: 2.74" (69.5 mm) **Weight:** 8 oz. (227 g)
Dimensions: H 4.00" (101.6 mm) x W 4.00" (101.6 mm) x D 1.00" (25.4 mm)



ENVIRONMENTAL

Enclosure: Black anodized aluminum, IP40 rated; **Operating Temperature:** 0° to 50° C (32° to 122° F)
Storage Temperature: 0° to 50° C (32° to 122° F); **Humidity:** up to 95% (non-condensing)

LIGHTING PARAMETERS

Aperture Diameter Defined: Diameter of opening through the illuminator

LIGHT SOURCE

Type: High output LEDs
Light Output: Millicandelas
Radiant Output: Milliwatts
Expected Life: 40,000 hours (Red, Infrared LEDs)
Expected Life: 10,000 hours (Blue, Ultraviolet LEDs)
Expected Life: 36,000 hours (White LEDs)
Eye Safety: EN 60825-1: Class 1 (Red, White, Infrared LEDs); Class 1M (Ultraviolet LEDs); Class 2 (Blue LEDs)

CONNECTOR

Type: M12 5-pin plug, A-code, 6 in. (150 mm) integrated cable

ELECTRICAL

Power: 20.2–28.8 VDC
Continuous Operation: No additional signals required
Continuous Operation with Dimming: 0 VDC (LEDs off) to 3.1–3.5 VDC (LEDs on) PWM signal. < 1 mA, modulation frequency 2 KHz +/- 100 Hz. Note: LED duty cycle will equal duty cycle of dimming signal when using this mode.
Continuous Operation with On/Off Control: 0 VDC (LEDs off) to 3.1–3.5 VDC (LEDs on), < 1 mA
High Output Strobe Operation: Optoisolated. 0 VDC (LEDs off) to 3.1–28.8 VDC (LEDs on). 10 mA max, 5 µs min to 10 ms max pulse width. Note: High Output Strobe internally limits LED frequency and pulse width to maximum of 90 Hz and 1 ms respectively.

M12 5-pin plug:



Pin Assignment

- 1 +24 VDC
- 2 Trigger (-)
- 3 DC Ground
- 4 Trigger (+)
- 5 Dimmer

CE COMPLIANT

ISO CERTIFICATION

Certified ISO 9001:2008 Quality Management System

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Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality. **Warranty**—One year limited warranty on parts and labor. Free extended 3 year warranty upon online product registration.

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