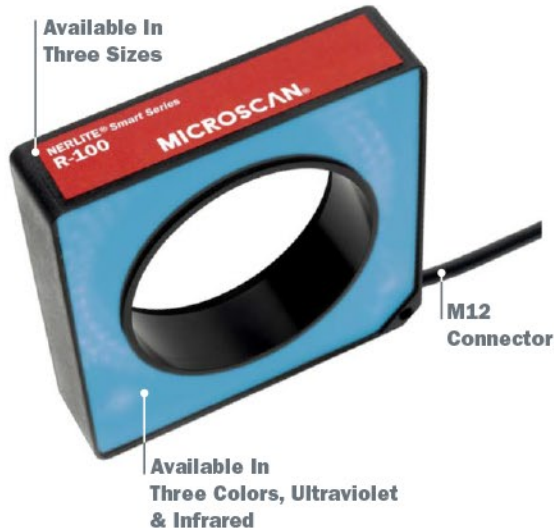


# NERLITE® RING LIGHT



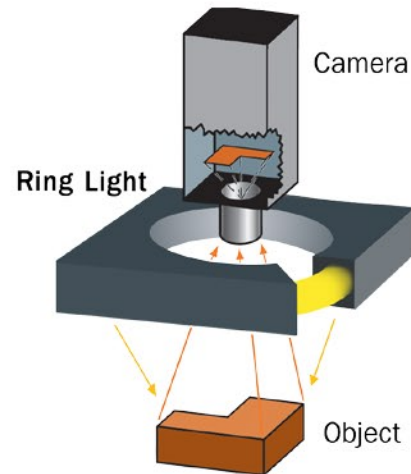
## Diffused Surface Lighting Solution

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.

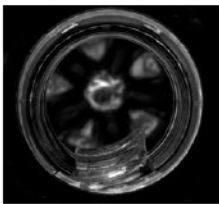
### Ring Light: At a Glance

- 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

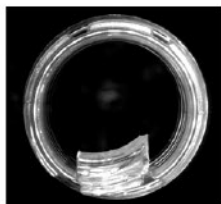


### Illumination Example:

Object



Resulting Image



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

### Application Examples

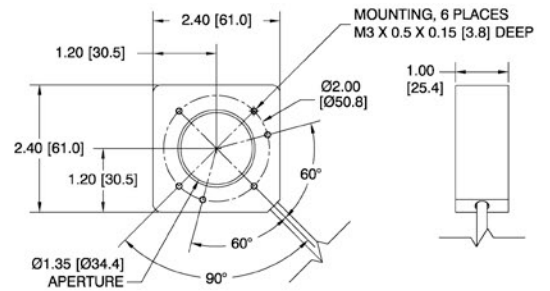
- Illuminate flat, diffused surfaces
- Inspection of circular objects (gaskets, washers)
- Label inspection
- Lab use where interchangeable optics such as diffusers or fresnel (focusing) lenses are desired
- When direct attachment to lens is required

# NERLITE® RING LIGHT SPECIFICATIONS AND OPTIONS

## R 60

DESCRIPTION	nm/K	CONT.		STROBE		mcd		mw	
		CURRENT	CURRENT	CURRENT	STROBE	CONT.	STROBE	CONT.	STROBE
R-60, Smart Series, Red	623 nm	140 mA	1.2 A	283759	2958239				
R-60, Smart Series, Blue	470 nm	140 mA	700 mA	124671	536355				
R-60, Smart Series, White	6700 K	140 mA	700 mA	305710	1512455				
R-60, Smart Series, Infrared	880 nm	110 mA	1.0 A					704	5884
R-60, Smart Series, Ultraviolet	375 nm	60 mA	200 mA					58	424

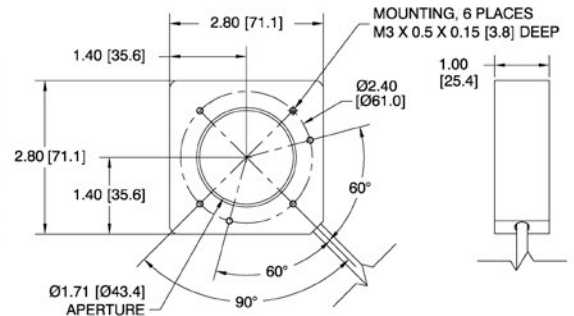
**Aperture Diameter:** 1.35" (34.4 mm) **Weight:** 4 oz. (113 g)  
**Dimensions:** H 2.40" (61 mm) x W 2.40" (61 mm) x D 1.00" (25.4 mm)



## R 70

DESCRIPTION	nm/K	CONT.		STROBE		mcd		mw	
		CURRENT	CURRENT	CURRENT	STROBE	CONT.	STROBE	CONT.	STROBE
R-70, Smart Series, Red	623 nm	172 mA	1.2 A	349281	3062913				
R-70, Smart Series, Blue	470 nm	160 mA	850 mA	143217	618814				
R-70, Smart Series, White	6700 K	160 mA	850 mA	352205	1739631				
R-70, Smart Series, Infrared	880 nm	120 mA	1.0 A					783	5924
R-70, Smart Series, Ultraviolet	375 nm	65 mA	230 mA					66	481

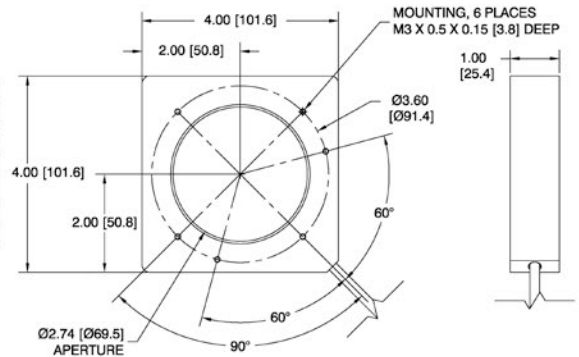
**Aperture Diameter:** 1.71" (43.4 mm) **Weight:** 5 oz. (136 g)  
**Dimensions:** H 2.80" (71.1 mm) x W 2.80" (71.1 mm) x D 1.00" (25.4 mm)



## R 100

DESCRIPTION	nm/K	CONT.		STROBE		mcd		mw	
		CURRENT	CURRENT	CURRENT	STROBE	CONT.	STROBE	CONT.	STROBE
R-100, Smart Series, Red	623 nm	255 mA	1.7 A	516015	4370388				
R-100, Smart Series, Blue	470 nm	235 mA	1.1 A	201005	848215				
R-100, Smart Series, White	6700 K	235 mA	1.1 A	495814	2338577				
R-100, Smart Series, Infrared	880 nm	150 mA	1.3 A					1105	9236
R-100, Smart Series, Ultraviolet	375 nm	100 mA	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:** Millicandela  
**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)

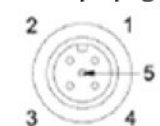
## CONNECTOR

**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



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