NERLITE® Ring Light

Diffused Surface Lighting Solution

Omron Microscan’s NERLITE Smart Series 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

For more information on this product, visit www.microscan.com.
## NERLITE® Ring Light Specifications and Options

### R 60

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>nm/K</th>
<th>CONT. STROBE</th>
<th>Strobe mcd</th>
<th>CONT. STROBE</th>
<th>mw</th>
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<td>R-60, Smart Series, Red</td>
<td>623</td>
<td>140 mA</td>
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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

<table>
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<tr>
<th>DESCRIPTION</th>
<th>nm/K</th>
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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

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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 LEDs)  
**Expected Life:** 10,000 hours (Blue LEDs)  
**Expected Life:** 36,000 hours (White LEDs)  
**Eye Safety:** EN 60825-1: Class 1 (Red, White LEDs); Class 1M; 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.

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