Illumination Example:

• Multiple lights may be combined to create larger illuminated areas
• Variety of colors and wavelengths for both continuous and strobed power sources
• High level of uniformity for repeatable results
• M12 connectors for easy connections to power supplies, drivers or advanced controllers
• Low-profile, compact shape for flexible integration

Backlight: At a Glance

NERLITE® Backlight

Edge-to-Edge Backlighting

Omron Microscan’s wide range of NERLITE products can illuminate any part or mark for successful machine vision and auto ID applications.

The Edge-to-Edge series of backlight illuminators provide sharp contrast to outline a part’s shape, find edges and view openings such as drilled holes. Edge-to-Edge technology allows combining multiple lights to address large field of view applications. High intensity and uniformity are packed into a low-profile industrial package for optimal thermal management.

Application Examples

• Locate or measure outside dimensions
• View openings (e.g., drilled holes)
• Diminish clear glass or plastic housings
• Measure thickness of materials
• Locate mounting holes
• Measure translucency
• Diffuse incident (front) lighting

Object Resulting Image

Light bulb: Resulting image clearly shows silhouette of filament inside the bulb.

For more information on this product, visit www.microscan.com.
NERLITE® Edge-to-Edge Backlight Specifications and Options

**BACKLIGHT 47x59**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>nm/K</th>
<th>CONT. CURRENT</th>
<th>STROBE CURRENT</th>
<th>mcd/cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL, 47x59, Red Continuous</td>
<td>640 nm</td>
<td>93 mA</td>
<td>2.67 A</td>
<td>1100</td>
</tr>
<tr>
<td>BL, 47x59, Red Strobe</td>
<td>640 nm</td>
<td>201 mA</td>
<td></td>
<td>880</td>
</tr>
</tbody>
</table>

Active Area: 1.9" x 2.3" (47 mm x 59 mm)  
Weight: 3 oz. (80 g)  
Dimensions: H 2.28” (58 mm) x W 2.3” (59 mm) x D 0.6” (15.2 mm)

**BACKLIGHT 71x88**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>nm/K</th>
<th>CONT. CURRENT</th>
<th>STROBE CURRENT</th>
<th>mcd/cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL, 71x88, Red Continuous</td>
<td>640 nm</td>
<td>170 mA</td>
<td>5.01 A</td>
<td>1135</td>
</tr>
<tr>
<td>BL, 71x88, Red Strobe</td>
<td>640 nm</td>
<td>330 mA</td>
<td></td>
<td>810</td>
</tr>
</tbody>
</table>

Active Area: 2.8" x 3.5" (71 mm x 88 mm)  
Weight: 5 oz. (140 g)  
Dimensions: H 3.21” (81.6 mm) x W 3.5” (88 mm) x D 0.6” (15.2 mm)

**BACKLIGHT 100x100**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>nm/K</th>
<th>CONT. CURRENT</th>
<th>STROBE CURRENT</th>
<th>mcd/cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL, 100x100, Red Continuous</td>
<td>640 nm</td>
<td>155 mA</td>
<td>4.99 A</td>
<td>700</td>
</tr>
<tr>
<td>BL, 100x100, Red Strobe</td>
<td>640 nm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL, 100x100, White Continuous</td>
<td>6500 K</td>
<td>350 mA</td>
<td></td>
<td>625</td>
</tr>
</tbody>
</table>

Active Area: 3.9" x 3.9" (100 mm x 100 mm)  
Weight: 7 oz. (200 g)  
Dimensions: H 4.36” (110.9 mm) x W 3.9” (100 mm) x D 0.66” (16.8 mm)

**BACKLIGHT 50x200**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>nm/K</th>
<th>CONT. CURRENT</th>
<th>STROBE CURRENT</th>
<th>mcd/cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>BL, 50x200, Red Continuous</td>
<td>640 nm</td>
<td>155 mA</td>
<td>4.99 A</td>
<td>700</td>
</tr>
<tr>
<td>BL, 50x200, Red Strobe</td>
<td>640 nm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BL, 50x200, White Continuous</td>
<td>6500 K</td>
<td>350 mA</td>
<td></td>
<td>625</td>
</tr>
</tbody>
</table>

Active Area: 2.0" x 7.9" (50 mm x 200 mm)  
Weight: 8 oz. (230 g)  
Dimensions: H 2.4” (60.9 mm) x W 7.9” (200 mm) x D 0.66” (16.8 mm)

**ENVIRONMENTAL**

Operating Temperature: 0°C to 40°C (32°F to 104°F)  
Storage Temperature: 0°C to 50°C (32°F to 122°F)  
Humidity: up to 95% (non-condensing)

**LIGHTING PARAMETERS**

Active Area Defined: Area of light output from the illuminator

**LIGHT SOURCE**

Type: High output LEDs  
Light Output: Millicandelas per square centimeter (mcd/cm²)  
Radiant Output: Milliwatts per square centimeter (mw/cm²)  
Expected Life: 50,000 hours  
Eye Safety: EN 60825-1: Class 1 (Red, White LEDs)

**CONNECTOR**

Type: 6 in. (150 mm) cable terminated with 4-pin M12 male connector

**ELECTRICAL**

Power (Continuous Models): 24 VDC +/- 1%  
Power (Strobe Models): 1 ms max, pulse width, 6% max duty cycle, use of NERLITE NL-200 Series Lighting Controller is required.

QMS CERTIFICATION

www.microscan.com/quality

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Read Range and other performance data is determined using high quality Grade A symbols per ISO/IEC 15415 and ISO/IEC 15416 in a 25°C environment. For application-specific Read Range results, testing should be performed with symbols used in the actual application. Omron Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality. Warranty—For current warranty information on this product, please visit www.microscan.com/warranty.

www.microscan.com