VE Series LED High-Intensity Ring Light

Datasheet
High-Intensity LED Ring Light for use with VE Series vision sensors

- Compact ring light for VE Series vision sensors
- Four extremely bright LEDs for illumination of targets from 0.15 meters to beyond 2 meters (0.49 feet to 6.56 feet)
- Continuous or strobed operation
- Optically isolated strobe signal
- Fixed or adjustable intensity, depending on model
- Maintenance-free, rugged construction
- Evenly and intensely illuminates a 610 millimeters (24 inches) diameter at 1 meter (3.28 feet)

Important: Lea el siguiente instructivo antes de operar el luminario. Por favor descargue desde www.bannerengineering.com toda la documentación técnica de los VE Series High Intensity Ring Lights, disponibles en múltiples idiomas, para detalles del uso adecuado, aplicaciones, advertencias, y las instrucciones de instalación de estos dispositivos.

Models

<table>
<thead>
<tr>
<th>Model</th>
<th>LED Color</th>
<th>Intensity Adjustment</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEDRV70XD6-XM</td>
<td>Visible red, 620 nm to 630 nm</td>
<td>Fixed</td>
<td>300 mm (12 in) cable with a threaded 3-pin Pico-style connector</td>
</tr>
<tr>
<td>LEDWRV70XD6-XM</td>
<td>White, 5000 K to 8300 K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDBRV70XD6-XM</td>
<td>Visible blue, 465 nm to 485 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDGRV70XD6-XM</td>
<td>Visible green, 520 nm to 535 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDIRV70XD6-XM</td>
<td>Infrared, 850 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDUV395RV70XD6-XM</td>
<td>Ultraviolet, 395 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDRV70XD6-PM</td>
<td>Visible red, 620 nm to 630 nm</td>
<td>Potentiometer</td>
<td></td>
</tr>
<tr>
<td>LEDWRV70XD6-PM</td>
<td>White, 5000 K to 8300 K</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDBRV70XD6-PM</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LEDUV395RV70XD6-PM</td>
<td>Ultraviolet, 395 nm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following caution applies to ultraviolet, 395 nm models:

CAUTION: Risk Group 2: UV Emitted from this product.
Eye or skin irritation may result from exposure. Use appropriate shielding and eye protection. Risk Group 2 (RG 2) products generally do not pose a realistic optical hazard if aversion responses limit the exposure duration or where lengthy exposures are unrealistic.
- IEC 62471

Note: Ring lights are not compatible with VELC.- Sealed Lens Covers. Use another lighting technique if an IP67 rating is needed for your application.

Install the Ring Light
1. Attach the ring light bracket to the sides of the VE Series vision sensor using the provided hardware kit.
2. Connect the cable to the sensor.

Light Intensity Adjustment
Turn the 270° intensity potentiometer with a small flat-blade screwdriver to adjust the light’s intensity.

1. Apply power to the light and turn the potentiometer all the way clockwise for maximum intensity.
2. If the object to be sensed is too bright at maximum intensity, turn the potentiometer counterclockwise, a little at a time, testing with the target object, until the correct brightness is achieved.

Connects directly to the VE Series vision sensors
Specifications

Light Source
Four high-intensity LEDs; see models table for wavelengths

Illumination
610 mm (24 in) diameter usable light pattern at 1 m (3.28 ft)

Strobe
Optically isolated

Supply Voltage and Current
Operating Voltage: 24 V DC ±10%
Strobe Voltage: 5 V DC to 24 V DC @ 15 mA maximum
Current Draw at Full Intensity: 350 mA maximum
Built-in constant current regulator for LEDs
Potentiometer controls variable intensity for “P” models
See the electrical characteristics on the product label.

Strobe Type
Active low

Connection
300 mm (12 in) cable with a threaded 3-pin Pico-style connector

Construction
Housing: Aluminum, black anodized
Window: Acrylic, clear with frosted diffusing surface on inside
Bracket: Cold-rolled steel with black gloss e-coat plating. Attaches the ring light directly to the VE 200 Series vision sensor with four included M3 x 6 mm screws

Useful Life
When operated within specifications, output decreases less than 30% after 50,000 hours for visible and IR models, 20,000 hours for UV models

Operating Conditions
Temperature: 0 °C to +50 °C (+32 °F to +122 °F)
Humidity: 90% maximum relative humidity (non-condensing)

Environmental Rating
IEC IP50

Certifications

Light Characteristics
Values shown are typical @ 25°C.

<table>
<thead>
<tr>
<th></th>
<th>Lumens</th>
<th>mWatts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cool White</td>
<td>390</td>
<td>340</td>
</tr>
<tr>
<td>Green</td>
<td>340</td>
<td>240</td>
</tr>
<tr>
<td>Red</td>
<td>130</td>
<td>945</td>
</tr>
<tr>
<td>Blue</td>
<td>130</td>
<td>945</td>
</tr>
<tr>
<td>IR</td>
<td>130</td>
<td>945</td>
</tr>
<tr>
<td>UV395</td>
<td>130</td>
<td>945</td>
</tr>
</tbody>
</table>

Optical Data

Isolux Pattern

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>Max Center Beam Lux (lx)</th>
<th>Max Center Beam Irradiance (mW/m²)</th>
<th>Beam Width [°]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cool White</td>
<td>Green</td>
<td>Red</td>
</tr>
<tr>
<td>0.25</td>
<td>18,820</td>
<td>14,499</td>
<td>10,228</td>
</tr>
<tr>
<td>0.50</td>
<td>5,150</td>
<td>4,490</td>
<td>3,169</td>
</tr>
<tr>
<td>1.00</td>
<td>1,125</td>
<td>981</td>
<td>692</td>
</tr>
</tbody>
</table>

Values shown are typical at 25 °C.
Dimensions

All measurements are listed in millimeters [inches], unless noted otherwise.

**Clean the Light**

Regularly remove dust, dirt, or fingerprints from the light source.

1. Blow off dust using anti-static compressed air.
2. If necessary, use a lens cloth and lens cleaner or window cleaner to wipe off remaining debris.

*Important: Do not use any other chemicals for cleaning the light source.*

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For patent information, see [www.bannerengineering.com/patents](http://www.bannerengineering.com/patents).

**Mexican Importer**

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