VE Series LED High-Intensity Sealed Ring Light

Datasheet

High-Intensity Sealed LED Ring Light for use with VE Series smart cameras

- Rugged, waterproof IEC IP67 housing, for use with VE Series smart cameras in wet or dirty environments
- Six extremely bright LEDs for even illumination of targets
- Continuous or strobed operation
- Maintenance-free, rugged construction
- Power, configure, and mount directly with VE Series smart cameras
- Available with borosilicate glass or polycarbonate window

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

Models

The following sealed ring lights are compatible with all WVGA, 1.3 MP, and 2 MP models with lenses installed. The sealed ring lights are compatible with some 5 MP models with lenses installed\(^1\).

<table>
<thead>
<tr>
<th>Model</th>
<th>LED Color</th>
<th>Window Construction</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEDIRV75BM</td>
<td>Infrared, 850 nm ±5 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDRRV75BM</td>
<td>Visible red, 625 nm ±5 nm</td>
<td>Borosilicate Glass</td>
<td></td>
</tr>
<tr>
<td>LEDBRV75BM</td>
<td>Visible blue, 475 nm ±5 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDGRV75BM</td>
<td>Visible green, 525 nm ±10 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDWRV75BM</td>
<td>Visible white, 6200K ±500K/±550K</td>
<td>350 mm (13.8 in) Pico 3-Pin Quick-Disconnect</td>
<td></td>
</tr>
<tr>
<td>LEDIRV75PM</td>
<td>Infrared, 850 nm ±5 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDRRV75PM</td>
<td>Visible red, 625 nm ±5 nm</td>
<td>Polycarbonate Plastic</td>
<td></td>
</tr>
<tr>
<td>LEDBRV75PM</td>
<td>Visible blue, 475 nm ±5 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDGRV75PM</td>
<td>Visible green, 525 nm ±10 nm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEDWRV75PM</td>
<td>Visible white, 6200K ±500K/±550K</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Install the Ring Light

1. Remove the black thread protector (not shown) from the camera.
2. Remove the temporary imager cover (not shown).

\(^1\) For 5 MP camera and lens, the sealed ring light is compatible with 12 mm to 50 mm focal length lenses with a filter installed. Without a filter installed, the sealed ring light is compatible with 75 mm focal lengths. The use of the LHWK-1 setscrew accessory kit is required for focus and aperture locking when using a ring light.
3. Install and focus the C-mount lens (1).
4. Thread the filter (2), if using, onto the front of the lens. Filters are recommended to improve image quality.
5. Fit a single o-ring (3) into the undercut area behind the camera threads.
6. Thread the ring light (4) onto the threaded portion of the camera.
7. Connect the cable from the ring light to the camera (5).

### Wiring

<table>
<thead>
<tr>
<th>Pin</th>
<th>Wire Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brown</td>
<td>+V</td>
</tr>
<tr>
<td>2</td>
<td>Blue</td>
<td>-V</td>
</tr>
<tr>
<td>3</td>
<td>Black</td>
<td>Off: +5 V DC to +24 V DC On: -V or not connected</td>
</tr>
</tbody>
</table>

### Maintenance

Regularly remove dust, dirt, or fingerprints from the lens cover. Use anti-static compressed air to blow off dust. If necessary, use a lens cloth and lens cleaner or window cleaner to wipe off remaining debris.

### Sensing Shiny Surfaces

To eliminate direct reflections without using polarizing filters, angle the sensor approximately 15° (or more) from perpendicular to a shiny surface.

### Specifications

**Light Source**

Six high-intensity LEDs; see models table for wavelengths

**Illumination**

400 mm (15.75 in) diameter usable light pattern at 0.5 m (1.64 ft)

**Supply Voltage and Current**

- Operating Voltage: 24 V DC ±10%
- Strobe Voltage: 5 V DC to 24 V DC at 5 mA maximum
- Current Draw at Full Intensity: 270 mA maximum
- See the electrical characteristics on the product label.

**Strobe Type**

PWM (Pulse Width Modulation)

**Connection**

350 mm (13.8 in) cable with a threaded 3-pin Pico-style connector

**Construction**

- Housing: Painted black aluminum
- Window: Polycarbonate or borosilicate glass, depending on model

**Operating Conditions**

- Temperature: -20 °C to +50 °C (−4 °F to +122 °F)
- Humidity: 90% maximum relative humidity (non-condensing)

**Environmental Rating**

IEC IP67 when installed on VE Series smart cameras

**Certifications**

- CE
- UL

**Light Characteristics**

Values shown are typical at 25 °C.

<table>
<thead>
<tr>
<th></th>
<th>Lumens</th>
<th>mWatts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cool White</td>
<td>675</td>
<td>160</td>
</tr>
<tr>
<td>Green</td>
<td>450</td>
<td>1850</td>
</tr>
<tr>
<td>Red</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>IR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LEDxRV75
### Optical Data

#### Ring Light Isolux Pattern

![Isolux Pattern Diagram](image)

**Values shown are typical at 25 °C.**

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>Max Center Beam Lux (lux)</th>
<th>Max Center Beam Irradiance (mW/m²)</th>
<th>Beam Width (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>17,850</td>
<td>11,900</td>
<td>0.21</td>
</tr>
<tr>
<td>0.50</td>
<td>4428</td>
<td>2952</td>
<td>0.42</td>
</tr>
<tr>
<td>1.00</td>
<td>1150</td>
<td>767</td>
<td>0.83</td>
</tr>
</tbody>
</table>

### Dimensions

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

#### Banner Engineering Corp. Limited Warranty

Banner Engineering Corp. warrants its products to be free from defects in material and workmanship for one year following the date of shipment. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture which, at the time it is returned to the factory, is found to have been defective during the warranty period. This warranty does not cover damage or liability for misuse, abuse, or the improper application or installation of the Banner product.

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For patent information, see [www.bannerengineering.com/patents](http://www.bannerengineering.com/patents).
FCC Part 15 and CAN ICES-3 (B)/NMB-3(B)

This device complies with part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules and CAN ICES-3 (B)/NMB-3(B). These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the manufacturer.

Mexican Importer

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