Coaxial Lights
LFV3 Series

Enhanced Coaxial Lighting
for more optimal imaging

CCS Inc.
Coaxial Lighting
Re-engineered LFV3 Series

Brighter
Two times brighter than LFV2

Higher Quality Glass Window
Glass surface accuracy (0.3μm*)
*According to our analysis.

Choice of Diffusers
Low or high transmission diffusers available for unique effects
*Not available for LFV3-CP series or LFV3-34, -40 series

Product Line-up Available in Red, White, or Blue

<table>
<thead>
<tr>
<th>Eleven Standard Sizes</th>
<th>Compact Enclosure Design</th>
<th>New 52 x 102 mm Size</th>
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<td>LFV3-34 Series</td>
<td>LFV3-CP-13 Series</td>
<td>LFV3-90X100 Series</td>
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<tr>
<td>LFV3-35 Series</td>
<td>LFV3-CP-18 Series</td>
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<td>LFV3-100 Series</td>
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<td>LFV3-70 Series</td>
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<td>LFV3-100 Series</td>
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<td>LFV3-200 Series</td>
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</table>

Optical Glass
Optical glass on the camera window and a half-mirror that can also be used in laser light source interferometry. High-quality, accurate images can be taken.

Enlarged Camera Window Area
Ensures a large field of view.

Aluminum Body
Robust, aluminum alloy body allows for enhanced heat dissipation.

Attachable to Cable Surface
Cable can be bent flat against the mounting surface. Installation is possible using the mounting holes on the cable surface.

Ease of Installation
Additional mounting holes allow for flexible mounting options in a variety of orientations.

Note: These explanations for the LFV3 Series except the LFV3-CP-13 Series and LFV3-CP-18 Series.
Obtain optimal images for your application with LFV3 Series

**Option 1**

Selectable diffuser option and position creates desired effect

### 2 Diffuser Options

- **High Transmittance Diffuser:** Light – Standard for red & white colors
- **Low Transmittance Diffuser:** Dark – Standard for blue color

Applicable Models: LFV3-35,-50,-50X100,-70,-100,-130,-200.

*Not available for LFV3-CP Series, or LFV3-34 & LFV3-40 Series.

### Flexible Diffuser Positions

Applicable Models: LFV3-35,-50,-50X100,-70,-100,-130,-200.

*Not available for LFV3-CP, LFV3-34, LFV3-35 & LFV3-40 Series.

**Examples**

**Light Diffuser + LFV3-50RD**
- Standard

**Light Diffuser + LFV3-50SW**
- Standard

**Light Diffuser + LFV3-50RD**
- Modified diffuser position

**Dark Diffuser + LFV3-50SW**
- Dark diffuser increases uniformity

**Option 2**

Evenly illuminate rectangular shapes

- **Solar Panel**
- **LFV2-50RD**
  - Diffuser position slits
  - 3 locations: for LFV3-35,-50X100,-70
  - 5 locations: for LFV3-100,-130,-200

- **LFV3-50X100RD**
  - Diffuser position slits
  - Size: 100 x 50mm
  - Diffuser increases uniformity

Due to the square shape of the light, the outer edges of the solar panel appear dark.

With the rectangular 100 x 50mm size light, the entire solar panel can be uniformly lit.
Brightness Data

* Representative examples.
* Measurements taken using standard diffuser type and standard mounting position used for each light.
* Brightness comparison: Irradiance comparison between previous and new models (are actual measured values).
* This data is for reference only and does not guarantee product quality. * Brightness varies depending on the spectral sensitivity of the camera.

LFV2-CP-13 Series
LFV2-200 Series
LFV2-130 Series
LFV2-70 Series
LFV2-50 Series
LFV2-40 Series
LFV2-35 Series
LFV-40 Series

Relative Irradiance (%)

0 10 20 30 40 50 60 70 80 90 100

LWD(mm)

0 5 10 15 20 25 30 35 40 45 50

Relative Irradiance (%)

0 10 20 30 40 50 60 70 80 90 100

LWD(mm)

0 5 10 15 20 25 30 35 40 45 50

Relative Irradiance (%)

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Relative Irradiance (%)

0 10 20 30 40 50 60 70 80 90 100

LWD(mm)

0 5 10 15 20 25 30 35 40 45 50

* Measurements taken using standard diffuser type and standard mounting position used for each light.

Brightness Comparison

<table>
<thead>
<tr>
<th>Previous Model</th>
<th>New Model</th>
<th>Factor of Brightness</th>
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</thead>
<tbody>
<tr>
<td>LFV-34 Series</td>
<td>LFV3-34 Series</td>
<td>2.1x 2.4x 2.8x</td>
</tr>
<tr>
<td>LFV2-35 Series</td>
<td>LFV3-35 Series</td>
<td>2.3x 2.1x 1.5x</td>
</tr>
<tr>
<td>LFV4-40 Series</td>
<td>LFV3-40 Series</td>
<td>2.2x 2.3x 2.5x</td>
</tr>
<tr>
<td>LFV2-50 Series</td>
<td>LFV3-50 Series</td>
<td>1.8x 1.9x 1.5x</td>
</tr>
<tr>
<td>LFV2-70 Series</td>
<td>LFV3-70 Series</td>
<td>2.1x 4.1x 1.7x</td>
</tr>
<tr>
<td>LFV2-100 Series</td>
<td>LFV3-100 Series</td>
<td>2.4x 1.8x 1.8x</td>
</tr>
<tr>
<td>LFV2-130 Series</td>
<td>LFV3-130 Series</td>
<td>1.7x 1.5x 2.0x</td>
</tr>
<tr>
<td>LFV2-200 Series</td>
<td>LFV3-200 Series</td>
<td>2.0x 1.8x 2.3x</td>
</tr>
<tr>
<td>LFV2-CP-13 Series</td>
<td>LFV3-CP-13 Series</td>
<td>3.1x 3.7x 3.8x</td>
</tr>
<tr>
<td>LFV2-CP-18 Series</td>
<td>LFV3-CP-18 Series</td>
<td>3.0x 2.9x 3.1x</td>
</tr>
</tbody>
</table>

* This data is for reference only and does not guarantee product quality. * Brightness varies depending on the spectral sensitivity of the camera. * Measurements taken using standard diffuser type and standard mounting position used for each light.

Light Intensity Fluctuation Comparison

* Representative examples. * Actual (not guaranteed) values measured at 100% light intensity, continuous mode, at 25°C ambient temperature. * Measurements taken using standard diffuser type and standard mounting position used for each light.
* Representative examples. * Measurements taken using standard diffuser type and standard mounting position used for each light. * This data is for reference only and does not guarantee product quality.
7 LFV3-100RD/SW/BL

8 LFV3-130RD/SW/BL

9 LFV3-200RD/SW/BL

10 LFV3-CP-13RD/SW/BL

11 LFV3-CP-18RD/SW/BL

Slits to adjust position in 5 locations on diffuser
Specifications

For quick access to product information, visit our website at www.ccs-grp.com and select 'Machine Vision Applications'. Search for products by entering the seven-digit digit number.

**LED color**
- Red (RD)
- White (SW)
- Blue (BL)

**Input voltage**
24V DC

**Case material**

**Cable length**
300 mm

**Connector**
SMR-03V-B

**Polarity**
1: (+), 2: no connection, 3: (-)

**Usage environment**
Temperature: 0 to 40°C, Humidity: 20% to 85% RH (with no condensation)

**Storage environment**
Temperature: -20 to 60°C, Humidity: 20% to 85% RH (with no condensation)

**CE marking**
Conforms to safety standard EN62471

**Environmental reg.**
RoHS compliant

**Cooling method**
Natural cooling

**Spectral distribution**

**Options**

- **2 choices of diffuser plates**
- **Polarizers: Minimize hot spots and glare**
- **LC film: Collimates light**

**Notes**: To ensure proper safety, refer to the "Instruction Guide" before use. Due to continuous quality improvements, product specifications and design are subject to change without notice. The examples of artwork in this brochure are intended as a guide to help you choose your own products. Please check the functions and requirements of your equipment when making your selections.