High-output UV LED Light Units

UV2 Series

Applications

- Magnetic particle inspection
- Penetrant inspection
- Coating agent inspection
- Adhesive application inspection
- and more

Ideal for observation by fluorescence
Ideal for observation by fluorescence
Replacing black lights

High-output UV LED Light Units

Coating Inspection
Application Example

Visible Light

High-output UV Light Unit

Only the coating agent on the board is captured.

Expanded Lineup
Narrow type now supported

Comparing brightness and irradiation range by types

NEw
Narrow type

Wide type

Wide-range irradiation

Narrow-range irradiation

With Lenses

Lensless

The irradiation is concentrated in a narrow range using lenses.

The irradiation covers a wide range.

Workpiece: Sticky note (75x75 mm)
Image subject: Packing tape on a film
Light Unit: LDR2-100UV2-365-N

Workpiece: Postcard (100x148 mm)
Image subject: Invisible ink
Light Unit: LDR2-100UV2-365-W

NEW

LDR2-100UV2-365-W
(Wide type)

LDR2-100UV2-365-N
(Narrow type)

Comparing brightness and irradiation range by types

* The data included is for reference only. Actual values may vary.
We accept custom orders for products to fit your needs in length, etc. Please feel free to ask your CCS representative for more details.
Technical Data for High-output UV LED Light Units

**Ring Lights**

<table>
<thead>
<tr>
<th>LDR2-60UV2-365-N</th>
<th>LDR2-60UV2-365-W</th>
<th>LDR2-100UV2-365-N</th>
<th>LDR2-100UV2-365-W</th>
</tr>
</thead>
</table>

**LWD characteristics**

**Uniformity**

**Narrow type**

Light Unit in use: LDR2-100UV2-365-N

**Wide type**

Light Unit in use: LDR2-100UV2-365-W

Note: The data shown above is for reference only. Results for individual products may vary.

**Spot Light**

HLV2-24UV2-365

Light Unit in use: HLV2-24UV2-365

**LWD characteristics**

**Uniformity**

Note: At short distances, uniformity of irradiation from narrow type Light Units is reduced. This may affect imaging depending on the type of workpiece.

Note: The data shown above is for reference only. Results for individual products may vary.
Bar Lights

<table>
<thead>
<tr>
<th>Light Unit in use: LDL-205X12UV2-365-N/-365</th>
<th>LDL-13X12UV2-365-N/-365</th>
<th>LDL-205X12UV2-365-N/-365</th>
<th>LDL-339X12UV2-365-N/-365</th>
</tr>
</thead>
</table>

**LWD characteristics**

- **Narrow type** (LDL-205X12UV2-365-N)
- **Wide type** (LDL-205X12UV2-365)

**Uniformity**

- **Narrow type** Light Unit in use: LDL-205X12UV2-365-N
  - LWD=40 mm
  - LWD=70 mm
  - LWD=100 mm

- **Wide type** Light Unit in use: LDL-205X12UV2-365
  - LWD=40 mm
  - LWD=70 mm
  - LWD=100 mm

Note: The data shown above is for reference only. Results for individual products may vary.

Bar Lights (Light condensing)

<table>
<thead>
<tr>
<th>Light Unit in use: LN-195UV2-365</th>
</tr>
</thead>
</table>

**LWD characteristics**

- Emitting surface width (long side): 195 mm

**Uniformity**

- LWD=100 mm

Note: The data shown above is for reference only. Results for individual products may vary.
**Application Examples**

### Imaging of Scratches by Magnetic Particle Inspection

- **Workpiece**: Metal component
- **High-output UV LED Light Unit**
  - Narrow type
- **Image**: Image of magnetic particle inspection viewed with the naked eye. With a high-output UV LED Light Unit, the scratches can be observed by fluorescence.
- **Notes**: The contrast of the image can be enhanced using the optional filters.

### Imaging of Text at the Bottom of an Aluminum Can

- **Workpiece**: Aluminum can
- **White Light**: Narrow type
- **High-output UV LED Light Unit**: Narrow type
- **Image**: With white light, it is difficult to capture the printed text at the bottom of the can.
- **Notes**: The contrast of the image can be enhanced using the optional filters.

### Imaging of Packing Tape on Film

- **Workpiece**: Sticky notes
- **White Light**
  - Narrow type
- **High-output UV LED Light Unit**
  - Narrow type
- **Image**: With white light, it is difficult to capture the sticky notes and the packing tape with high contrast.
- **Notes**: The contrast of the image can be enhanced using the optional filters.

### Imaging of Grease Coating on a Bearing

- **Workpiece**: Bearing
- **White Light**
  - Wide type
- **High-output UV LED Light Unit**
  - Wide type
- **Image**: With white light, it is difficult to capture the grease coating.
- **Notes**: The contrast of the image can be enhanced using the optional filters.

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The above sample workpiece has been made specifically for sample imaging.

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Common Specifications

<table>
<thead>
<tr>
<th>Input voltage</th>
<th>24 VDC (max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIE Marking</td>
<td>Conforms to safety standard EN 62471.</td>
</tr>
<tr>
<td>Environment</td>
<td>Temperature: 0 to 40°C, Humidity: 20% to 85% RH (with no condensation)</td>
</tr>
<tr>
<td>Lighting</td>
<td>Temperature: ~20 to 60°C, Humidity: 20% to 85% RH (with no condensation)</td>
</tr>
<tr>
<td>Light spectrum</td>
<td>Natural air cooling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Black Filters</th>
<th>Sharp-cut Filters</th>
<th>Green, yellow, and more.</th>
</tr>
</thead>
<tbody>
<tr>
<td>V44 Series</td>
<td>R60 Series</td>
<td>With Ultraviolet Cutting Filter</td>
</tr>
<tr>
<td>L42 Series</td>
<td></td>
<td>Other Filters</td>
</tr>
</tbody>
</table>

For assistance in selecting a Filter that is suitable for the excitation wavelength, contact your CCS sales representative.

For details on the customized filters, please contact your CCS sales representative.

CAUTION

Never look directly at or touch an ultraviolet light source.
When the Light Unit is ON, always wear protective UV glasses and be sure not to let any ultraviolet light enter your eyes.
Do NOT look directly at the radiating surface of the Light Unit while it is turned on. Also, do NOT turn it towards others.
Wear long sleeves and gloves and do not expose your skin to the ultraviolet light during operation.
Make sure that everyone in the vicinity of the Light Unit is aware of the dangers of ultraviolet light LEDs.

Precautions for UV Products

Make sure that everyone in the vicinity of the Light Unit is aware of the dangers of ultraviolet light LEDs.
Wear long sleeves and gloves and do not expose your skin to the ultraviolet light during operation.
Do NOT look directly at the radiating surface of the Light Unit while it is turned on. Also, do NOT turn it towards others.
Make sure that everyone in the vicinity of the Light Unit is aware of the dangers of ultraviolet light LEDs.

■ Optional UV Products

Transmits UV light waves and absorbs visible light.

U400 Transmission Filters

L42 Series

Cuts specific range of wavelength.

Sharp-cut Filters

Green, yellow, and more.

Customized Filters

For details on the customized filters, please contact your CCS sales representative.

CAUTION

Carefully read the User Manual before using the product to ensure correct operation. For product improvement, specifications and designs are subject to change without notice.
Use the workpiece imaging examples provided in this pamphlet as reference material for the selection of Light Units. The sample workpieces used in this pamphlet have been made specifically for sample imaging, and are not intended to represent product quality and performance.

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