Flat Lights
TH2 Series

Comprehensive product lineup to satisfy all your needs.

CCS Inc.
TH2 series

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## Product Lineup

<table>
<thead>
<tr>
<th>Type</th>
<th>TH2 series</th>
<th>TH2-PM series</th>
<th>TH2 series</th>
<th>TH2 series</th>
<th>TH2-CR series</th>
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</thead>
<tbody>
<tr>
<td>High-luminance</td>
<td>![Image]</td>
<td>![Image]</td>
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<tr>
<td>High-directivity</td>
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<tr>
<td>Large</td>
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<td>Camera-window</td>
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<td>![Image]</td>
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</tbody>
</table>

**LED color**

- **White**
- **Red**
- **Blue**

**Emitting surface size (mm)**

- 27x27
- 43x35
- 51x51
- 63x60
- 83x75
- 100x100
- 140x105
- 160x120
- 200x150
- 224x170
- 211x200

**Page**

- P.5
- P.9
- P.13
- P.17
- P.21

## Product Map

- **High-directivity type**
  - High-directivity of light. Ideal for dimension measurements.
  - Optimum for use with sheet shaped workpieces. Applicable to inspections using line sensor camera.
  - Expands the inspection region.

- **High-luminance type**
  - Applicable to a wide range of applications. Provides rich product lineup.
  - Good for inspecting large workpieces.

**Series**

- TH Series (Conventional products)
- TH2-CR series

**Brightness (Luminance)**

- High
- Rectangular type
- Large type

**Light emitting surface size (mm)**

- 25 to 500

Note: Some products are not included in the map.
### Application Examples

Please feel free to inquire about other applications.

<table>
<thead>
<tr>
<th>Product Lineup</th>
<th>High-luminance type</th>
<th>High-directivity type</th>
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</thead>
<tbody>
<tr>
<td>TH2 series</td>
<td>P. 5</td>
<td>TH2-PM series</td>
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</table>

#### Application Examples

- Inspecting liquid surface level in PET bottles
- Inspecting the appearance of screws
- Inspecting the appearance of electronic components
- Inspecting the appearance of transparent straw bags
- Inspecting the appearance of medicine bags
- Inspecting for faults in acrylic plates

- Pinhole inspection
- Inspection for burr of metal components
- Appearance inspection of automobile components
- Appearance inspection of glass containers
- Appearance inspection of pillar-shaped objects
- Dimension measurement of end mills
- Dimension measurement of connector pins
- and more
### Large type
- TH2 series P. 13
- Inspecting liquid surface level in large bottles
- Inspecting liquid volume in infusion bags
- Inspecting the appearance of wafers

### Rectangular type
- TH2 series P. 17
- Inspecting the appearance of cylindrical containers
- Inspecting for stains and foreign materials in non-woven fabrics
- Inspecting the appearance of long-size workpieces

### Camera-window type
- TH2-CR series P. 21
- Inspecting FIPG material of automobile components
- Inspecting for stains and foreign materials in disposable diapers
- Reading engraved text on metal components

- Inspection for faults in films
- Inspection for faults in sheet-shaped workpieces
- Appearance inspection of glass
- Other appearance inspections of long-size workpieces
- Inspection for foreign materials in disposable masks
- Reading engraved text on piston rings
- Appearance inspection of textured metal surface
- Light source for picking robots

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- Appearance inspection of automobile components
- Appearance inspection of large PET bottles
- Light source embedded in conveyors
- Dimension measurement of machined holes in large components

- and more
TH2 series

High-luminance type

Application examples

- Pinhole inspection
- Inspection for burr of metal components
- Appearance inspection of automobile components
- Appearance inspection of glass containers and more

New product
TH2-63X60SW (White)

Conventional product
TH-63X60SW (White)

Imaging liquid surface level in PET bottles

Shutter speed: 1/10,000
Amount of light: 100% intensity

Imaging the appearance of electronic components

Shutter speed: 1/10,000
Amount of light: 100% intensity

Inspecting the appearance of medicine (individual packaging)

Radiance comparison graph

Note: The data shown above is for reference only. Actual values may vary.

Features

High-luminance Flat Lights

Increased brightness.
Applicable to high-speed production lines.

New product
TH2-63X60SW (White)

Conventional product
TH-63X60SW (White)

Inspecting liquid surface level in PET bottles

Inspecting the appearance of electronic components

Inspecting the appearance of medicine (individual packaging)

We accept custom orders. Please feel free to inquire.

Changes in size

Wavelength/ correlated color temperature

Cable length

Light output

Format/ material

Connector format

Installation/ mounting

Imaging Examples

Inspecting liquid surface level in PET bottles

TH2-140X105SW

TH2-63X60SW

Inspecting the appearance of electronic components

TH2-63X60SW

Inspecting the appearance of medicine (individual packaging)

TH2-200X150SW

The state of the cutting edge and perforations are clearly recognized.

The appearance of the resin part and pins are clearly imaged.

Liquid surface level and the printed text are clearly imaged.
Surface-mounted LEDs are densely mounted. This enables high-output Flat Lights.

- Illumination image for the TH2 Series
  The LEDs are densely mounted on the surface of the circuit board. Diffused light is illuminated.

- Illumination image for the other Flat Lights
  LEDs embedded around light-guiding diffusion plate. Diffused light is illuminated.

**Data**

*The data included is for reference only. Actual values may vary.*
TH2 Series
High-luminance

Common Specifications

<table>
<thead>
<tr>
<th>Cable length</th>
<th>360 mm</th>
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<tr>
<td>Spectral distribution</td>
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</table>

<table>
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<td>4-branch Cable</td>
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<td>Robot Cable</td>
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Spectral distribution

- Blue 465 nm
- White 5,800 K

Product Lineup

<table>
<thead>
<tr>
<th>Model name</th>
<th>LED color</th>
<th>Power consumption</th>
<th>Peak wavelength/ correlated color temperature*</th>
<th>Options</th>
<th>Extension cables</th>
<th>Recommended Control Units</th>
<th>Weight</th>
<th>Drawing number</th>
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<td>POD PSB</td>
<td>24 V / 65 W</td>
<td>5,800 K</td>
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</tbody>
</table>

* The correlated color temperature is the same as that of conventional products TH series.
Value for the Light Unit: 5,600 K (used for TH series)
Value for individual LEDs: 6,600 K (used for TH series)

Environmental regulations
RoHS compliant

Changes in size, format, color, and combination of Light Units and POD-series Control Unit can be made.

For detailed information on the Control Units and extension cables, refer to our website or the General Catalog of LED Lighting for Machine Vision Applications.

* For information on the combination of Light Units and POD-series Control Unit, please refer to our website: http://www.ccs grp.com/lnk/qr/pod
Note: Even for the Light Units of the same emitting surface size, the thickness and other dimensions of the product differ between the high-luminance and high-directivity type Light Units. Be sure to check the dimension diagrams before installing the Light Units.

Dimensions

TH2 Series
High-luminance

TH2-PM Series
High-directivity

TH2 Series
Large

TH2 Series
Rectangular

TH2-CR Series
Camera-window

TH-CL Series

Nut slot detail diagram
Achieved high directivity of light.

These high-output Flat Light Units are equipped with improved light directivity. This makes them ideal for dimension measurements and other inspections that require outline extraction of the workpiece.

### Imaging Examples

- **Inspecting the appearance of screws**
  - Workpiece image: TH2-63X60SW-PM
  - Screws
  - The outline of the screw threads is clearly imaged.

- **Inspecting the appearance of transparent straw bags**
  - Workpiece image: TH2-140X105SW-PM
  - Straws
  - The glued portions are clearly imaged.

- **Inspecting the appearance of transparent acrylic plates**
  - Workpiece image: TH2-83X75SW-PM
  - Transparent acrylic plates
  - Even with a fine scratch, it is possible to make an image with high contrast.
Comparison of light directivity between the TH2-series Light Units

**High-luminance type**

TH2-100X100SW

Illuminates a wide space.
(normal directivity)

**High-directivity type**

TH2-100X100SW-PM

Provides light with high directivity.

Comparison of images

- **Workpiece image**
  - TH2-83X75SW (Normal directivity)
  - TH2-83X75SW-PM (High-directivity type)

  It is difficult to capture the fine scratch.

  Even with a fine scratch, it is possible to make an image with high contrast.

Data

<table>
<thead>
<tr>
<th>Uniformity (Relative radiance)</th>
<th>TH2-27X27SW-PM</th>
<th>TH2-63X60SW-PM</th>
<th>TH2-160X120SW-PM</th>
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<td>63 mm</td>
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<td>TH2 Series Rectangular</td>
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<td>TH2-CL Series</td>
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*The data included is for reference only. Actual values may vary.*
TH2 series
High-directivity

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**Common Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Cable length</td>
<td>360 mm</td>
</tr>
<tr>
<td>Case material</td>
<td>Aluminum alloy, Resin</td>
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<tr>
<td>Cooling method</td>
<td>Natural air-cooling</td>
</tr>
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<td>Operation environment</td>
<td>Temperature: 0 to 40°C, Humidity: 20 to 85%RH (with no condensation)</td>
</tr>
<tr>
<td>Storage environment</td>
<td>Temperature: 20 to 60°C, Humidity: 20 to 85%RH (with no condensation)</td>
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<tr>
<td>CE marking</td>
<td>Safety standard: Conforms to EN62471</td>
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<tr>
<td>Environmental regulations</td>
<td>RoHS compliant</td>
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<tr>
<td>Spectral distribution</td>
<td>![Spectral Distribution Graph]</td>
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**Product Lineup**

<table>
<thead>
<tr>
<th>Model name</th>
<th>LED color</th>
<th>Power consumption</th>
<th>Peak wavelength/ correlated color temperature</th>
<th>Options</th>
<th>Extension cables</th>
<th>Recommended Control Units</th>
<th>Weight</th>
<th>Drawing number</th>
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<tr>
<td>TH2-51X51SW-PM</td>
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<td>5,300 K</td>
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<tr>
<td>TH2-51X51BL-PM</td>
<td>Blue</td>
<td>24 V / 9.9 W</td>
<td>465 nm</td>
<td></td>
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<tr>
<td>TH2-63X60RD-PM</td>
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<td>24 V / 9.9 W</td>
<td>635 nm</td>
<td></td>
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<td>TH2-63X60SW-PM</td>
<td>White</td>
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<td>5,300 K</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TH2-63X60BL-PM</td>
<td>Blue</td>
<td>24 V / 7.2 W</td>
<td>465 nm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TH2-83X75RD-PM</td>
<td>Red</td>
<td>24 V / 15 W</td>
<td>635 nm</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TH2-83X75SW-PM</td>
<td>White</td>
<td>24 V / 16 W</td>
<td>5,300 K</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>TH2-83X75BL-PM</td>
<td>Blue</td>
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<td>TH2-100X100RD-PM</td>
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<td>TH2-100X100SW-PM</td>
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<td>24 V / 25 W</td>
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<td>TH2-140X105RD-PM</td>
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<tr>
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<td></td>
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<td></td>
</tr>
<tr>
<td>TH2-160X120RD-PM</td>
<td>Red</td>
<td>24 V / 34 W</td>
<td>635 nm</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>TH2-160X120SW-PM</td>
<td>White</td>
<td>24 V / 35 W</td>
<td>5,300 K</td>
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</tr>
<tr>
<td>TH2-160X120BL-PM</td>
<td>Blue</td>
<td>24 V / 35 W</td>
<td>465 nm</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

For detailed information on the Control Units and extension cables, refer to our website or the General Catalog of LED Lighting for Machine Vision Applications.

* For information on the combination of Light Units and POD-series Control Unit, please refer to our website: http://www.ccs-grp.com/en/pod
Note: Even for the Light Units of the same emitting surface size, the thickness and other dimensions of the product differ between the high-luminance and high-directivity type Light Units. Be sure to check the dimension diagrams before installing the Light Units.

(Unit: mm)
Flat Light Units with emitting surfaces of up to 500 x 500 mm

Large sizes are now available. Ideal for inspecting large workpieces.

The large emitting surface (up to 500 x 500 mm) enables inspections over a wide area.

Features

Imaging Examples

Inspecting liquid surface level in large bottles (1.8 L)

Inspecting liquid surface level in infusion bags

Inspecting the appearance of wafers

We accept custom orders. Please feel free to inquire.
Comparison of emitting surface size between the TH2-series Light Units

High-luminance type

Ideal for inspecting large workpieces.

The emitting surface size is up to 211 x 200 mm.

Sizes up to 500 x 500 mm are available.

The large type lets you expand the inspection region so that you can inspect large workpieces in the same production line.

Comparison of the maximum workpiece size in a production line

Data

* The data included is for reference only. Actual values may vary.
**TH2 series**

Large

We accept custom orders. Please feel free to inquire.

### Common Specifications

<table>
<thead>
<tr>
<th>Cable length</th>
<th>360 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case material</td>
<td>Aluminum alloy, Resin</td>
</tr>
<tr>
<td>Cooling method</td>
<td>Natural air-cooling</td>
</tr>
<tr>
<td>Operation environment</td>
<td>Temperature: 0 to 40°C, Humidity: 20 to 85%RH (with no condensation)</td>
</tr>
<tr>
<td>Storage environment</td>
<td>Temperature: -20 to 60°C, Humidity: 20 to 85%RH (with no condensation)</td>
</tr>
<tr>
<td>CE marking</td>
<td>Safety standard: Conforms to EN62471</td>
</tr>
<tr>
<td>Environmental regulations</td>
<td>RoHS compliant</td>
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### Product Lineup

<table>
<thead>
<tr>
<th>Model name</th>
<th>LED color</th>
<th>Power consumption</th>
<th>Peak wavelength/ correlated color temperature</th>
<th>Options</th>
<th>Extension Cables</th>
<th>Recommended Control Units</th>
<th>Weight</th>
<th>Drawing number</th>
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</thead>
<tbody>
<tr>
<td>TH2-300X300RD</td>
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<td>24 V / 85 W</td>
<td>635 nm</td>
<td>FCB-EL2 Straight Cable</td>
<td>FCB-W-EL2 2-branch Cable</td>
<td>PD3-10024-8</td>
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<td>PSB3-30024</td>
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<tr>
<td>TH2-380X250SW</td>
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<td>5,800 K</td>
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<tr>
<td>TH2-400X400RD</td>
<td>Red</td>
<td>24 V / 130 W</td>
<td>635 nm</td>
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<tr>
<td>TH2-400X400SW</td>
<td>White</td>
<td>24 V / 153 W</td>
<td>5,800 K</td>
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</tr>
<tr>
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<td>635 nm</td>
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<tr>
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<td>White</td>
<td>24 V / 239 W</td>
<td>5,800 K</td>
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</tbody>
</table>

For detailed information on the Control Units and extension cables, refer to our website or the General Catalog of LED Lighting for Machine Vision Applications.
Dimensions

1. TH2 Series
   High-luminance
   TH2-PM Series
   High-directivity
   TH2 Series
   Large
   TH2 Series
   Rectangular
   TH2-CR Series
   Camera-window
   TH-CL Series

   (Unit: mm)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>TH2 Series</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>High-luminance</td>
</tr>
<tr>
<td></td>
<td>TH2-PM Series</td>
</tr>
<tr>
<td></td>
<td>High-directivity</td>
</tr>
<tr>
<td></td>
<td>TH2 Series</td>
</tr>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Rectangular</td>
</tr>
<tr>
<td></td>
<td>Camera-window</td>
</tr>
<tr>
<td></td>
<td>TH-CL Series</td>
</tr>
</tbody>
</table>

   |          |          |
   | 320      | 300 (Emitting surface) |
   |          | EL connector |
   |          | 8 x M5 |
   |          | (For installation) |
   |          |          |

   |          |          |
   | 380      | 300 (Emitting surface) |
   |          | EL connector |
   |          | 8 x M5 |
   |          | (For installation) |
   |          |          |

   |          |          |
   | 420      | 400 (Emitting surface) |
   |          | EL connector |
   |          | 8 x M6 |
   |          | (For installation) |
   |          |          |

   |          |          |
   | 520      | 500 (Emitting surface) |
   |          | EL connector |
   |          | 8 x M6 |
   |          | (For installation) |
   |          |          |
**TH2 series**

**Rectangular type**

---

**Flat Light Units with a 300 x 75 mm emitting surface**

These Light Units are optimum for inspecting rectangular workpieces.

Applicable to inspections of sheet-shaped workpieces by line sensor cameras.

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**Features**

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**Imaging Examples**

- **Inspecting for stains and foreign materials in non-woven fabrics**
  - Workpiece image
  - TH2-300X75SW
  - The foreign materials on the surface of non-woven fabrics are clearly imaged.

- **Inspecting the appearance of cylindrical containers**
  - Workpiece image
  - TH2-300X75SW
  - The surface state is imaged. The printed text is also clearly visible.

- **Inspecting the appearance of long-size workpieces**
  - Workpiece image
  - TH2-300X75SW
  - The outline is clearly imaged.

---

We accept custom orders. Please feel free to inquire.
Comparison of emitting surface size between the TH2-series Light Units

**Ideal for inspecting rectangular workpieces.**
(For use with area sensor cameras)

- Emitting surface size: 83 x 75
- Emitting surface size: 300 x 300

The length is too short to be applied to the workpiece.

The length is suitable, but there are large unused areas.

**Rectangular type**
Emitting surface size: 300 x 75

- Emitting surface size: 300 x 75
- Emitting surface size: 300 x 300

We will provide the ideal size for the workpiece to help you save space.

**Ideal for use with line sensor cameras**

- Line sensor camera
- Emitting surface size: 300 x 75

**Data**

* The data included is for reference only. Actual values may vary.

**Uniformity**
(Relative radiance)

TH2-300X75SW

- For sheet-shaped workpieces
- For cylindrical workpieces
- Also reproduce the effect of Dome Lights.

Can be used for a wide range of applications.
For detailed information on the Control Units and extension cables, refer to our website or the General Catalog of LED Lighting for Machine Vision Applications.
**Dimensions**

- **TH2 Series**
  - High-luminance
  - TH2-PM Series
  - High-directivity
  - TH2 Series
  - Large
  - TH2 Series
  - Rectangular
  - TH2-CR Series
  - Camera-window
  - TH-CL Series

(Unit: mm)

![Diagram]

- 2 x 100 = 200
- 308 (Emitting surface)
- 312
- 10-M3 depth 4
  - (Reserved for installing options)
- 56
- 19
- 2 x 100 = 200
- 56
- 88
- 6-M4 depth 5
  - (For installation)
- EL connector

- 4 slots for M3 nuts
- Nut slot detail diagram
- TH2 Series
- High-luminance
- TH2-PM Series
- High-directivity
- TH2 Series
- Large
- TH2 Series
- Rectangular
- TH2-CR Series
- Camera-window
- TH-CL Series

Dimensions
TH2-CR series

Application examples
- Inspection for foreign materials in disposable masks
- Reading engraved text on piston rings
- Appearance inspection of textured metal surface
- Robot picking and more

Features

Wide-field and highly-uniform illumination
Flat Light Units with a camera window provide light from the same axis as the camera in the way Dome Lights and Coaxial Lights do.
The wide emitting surface enables wide-field and highly-uniform illumination.

Imaging Examples

Inspecting FIPG material of metal components

Inspecting for stains and foreign materials in disposable diapers

Reading engraved text on metal surface

Workpiece image

TH2-300X300SW-CR35

FIPG material of metal components

TH2-300X300SW-CR35

The state of FIPG material is recognized.
* The above sample workpiece has been made specifically for sample imaging.

Disposabla diapers

TH2-300X300SW-CR35

The foreign material on the surface is imaged.

Textured metal

TH2-150X150SW-CR35

The engraved text is clearly imaged.
Comparison of structures

- **LFV3-200**
  - Field of view: narrow
  - The narrow field of view limits the size of the workpieces.
  - The Light Unit takes up too much space.

- **HPD2-200**
  - Field of view: wide
  - The narrow space between the Light Unit and the workpiece interferes with picking by robots.

- **TH2-211X200-CR35**
  - Thin case design.
  - Wide illuminated area.
  - High uniformity.

Compatible with a wide range of workpiece sizes.

Larger workpieces also can be inspected in the same production line.

Other customizable items:
- Changes in the size of the camera window
- Changes in the LED color (blue, infrared, or other color)

Please contact your CCS sales representative for details.

Data

**TH2-300X300SW-CR35**

**Relative irradiance graph**

<table>
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<th>LWD (mm)</th>
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<th>50</th>
<th>100</th>
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<tbody>
<tr>
<td>150</td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>500</td>
<td></td>
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<td>50</td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td></td>
<td>0</td>
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</table>

**Uniformity**

<table>
<thead>
<tr>
<th>LWD (mm)</th>
<th>0</th>
<th>50</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td></td>
<td></td>
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<tr>
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<td></td>
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<td>50</td>
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<tr>
<td>1000</td>
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<td></td>
<td>0</td>
</tr>
</tbody>
</table>

*The data included is for reference only. Actual values may vary.*
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* For information on the combination of Light Units and POD-series Control Unit, please refer to our website: http://www.ccs-grp.com/lnk/qrpod

Light Units with a 500 x 500 mm emitting surface are available for custom orders. We also accept custom orders for the size of the camera window, LED color (blue, infrared, or other color), etc. Please feel free to contact your CCS sales representative for details.
**Cohesive Text Extracted for Natural Reading:**

**TH-CL Series Special Orders**

**Do You Face This Problem?**

“The standard Light Units don’t have the right size, but studying specifications for custom production is time consuming.”

**Let CCS Help You.**

**Cohesive Text Extracted for Natural Reading:**

**Faster specifications development, schematic delivery, and estimates.**

**Product Lineup**

<table>
<thead>
<tr>
<th>Model</th>
<th>RD</th>
<th>SW (white)</th>
<th>BL (blue)</th>
<th>Emitting surface size (mm)</th>
<th>Power consumption (max.)</th>
<th>Weight (max.)</th>
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<tbody>
<tr>
<td>TH-30X30-CL</td>
<td>RD</td>
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<td>60 g</td>
<td>1.6 W</td>
<td>30x30</td>
<td>1.9 W</td>
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<td>TH-60X30-CL</td>
<td>RD</td>
<td>SW/BL</td>
<td>90 g</td>
<td>3.1 W</td>
<td>60x30</td>
<td>3.8 W</td>
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<td>TH-60X60-CL</td>
<td>RD</td>
<td>SW/BL</td>
<td>140 g</td>
<td>6.1 W</td>
<td>60x60</td>
<td>7.6 W</td>
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<td>TH-90X30-CL</td>
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<td>130 g</td>
<td>4.6 W</td>
<td>90x30</td>
<td>5.7 W</td>
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<td>SW/BL</td>
<td>190 g</td>
<td>9.1 W</td>
<td>90x60</td>
<td>12 W</td>
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<td>SW/BL</td>
<td>260 g</td>
<td>14 W</td>
<td>90x90</td>
<td>18 W</td>
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<td>160 g</td>
<td>6.1 W</td>
<td>120x30</td>
<td>7.6 W</td>
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<td>SW/BL</td>
<td>240 g</td>
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<td>16 W</td>
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<td>19 W</td>
<td>120x120</td>
<td>23 W</td>
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<td>SW/BL</td>
<td>230 g</td>
<td>7.6 W</td>
<td>150x30</td>
<td>9.5 W</td>
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<td>16 W</td>
<td>150x60</td>
<td>19 W</td>
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<td>400 g</td>
<td>23 W</td>
<td>150x90</td>
<td>29 W</td>
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<td>SW/BL</td>
<td>620 g</td>
<td>38 W</td>
<td>150x150</td>
<td>48 W</td>
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<tr>
<td>TH-180X30-CL</td>
<td>RD</td>
<td>SW/BL</td>
<td>270 g</td>
<td>9.1 W</td>
<td>180x30</td>
<td>12 W</td>
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<tr>
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<td>SW/BL</td>
<td>380 g</td>
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<td>180x60</td>
<td>23 W</td>
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<td>760 g</td>
<td>180x150</td>
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<td>57 W</td>
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<td>180x180</td>
<td>55 W</td>
<td>69 W</td>
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<td>SW/BL</td>
<td>300 g</td>
<td>210x30</td>
<td>11 W</td>
<td>14 W</td>
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<td>210x60</td>
<td>22 W</td>
<td>27 W</td>
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<td>210x90</td>
<td>32 W</td>
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<td>TH-210X150-CL</td>
<td>RD</td>
<td>SW/BL</td>
<td>810 g</td>
<td>210x150</td>
<td>53 W</td>
<td>67 W</td>
</tr>
<tr>
<td>TH-210X180-CL</td>
<td>RD</td>
<td>SW/BL</td>
<td>930 g</td>
<td>210x180</td>
<td>64 W</td>
<td>80 W</td>
</tr>
<tr>
<td>TH-210X210-CL</td>
<td>RD</td>
<td>SW/BL</td>
<td>1,060 g</td>
<td>210x210</td>
<td>75 W</td>
<td>93 W</td>
</tr>
</tbody>
</table>

**Common Specifications**

- **LED color:** Red (RD) 630 nm, White (SW) 6,600 K*, Blue (BL) 470 nm
- **Input voltage:** DC24 V (max.)
- **Case material:** Aluminum alloy, acrylic resin (diffuser)
- **Cable length:** 300 mm
- **Cooling method:** Natural air cooling
- **Weight:**
  - Red: 60 g
  - White: 330 g
  - Blue: 860 g

*The correlated color temperature is the same as that of TH2 series.

Value for individual LEDs: 6,600 K (used for TH-CL series)

Value for the Light Unit: 5,800 K (used for TH2 series)

**Notes:**

- Let CCS Help You.
- Faster specifications development, schematic delivery, and estimates.
## Models with an SM Connector (Power Consumption of Less Than 47 W)

**Series and model** | **A** | **B** | **C** | **D** | **E** | **F**  
---|---|---|---|---|---|---  
TH-30X30 | 30 | 30 | 20 | 30 | 6 | 11  
TH-60X30 | 60 | 30 | 50 | 30 | 6 | 11  
TH-90X60 | 90 | 30 | 80 | 30 | 6 | 11  
TH-90X90 | 90 | 90 | 80 | 60 | 21 | 11  
TH-120X30 | 120 | 30 | P50x>10 | 30 | 6 | 16  
TH-120X60 | 120 | 60 | P50x>10 | 60 | 6 | 16  
TH-120X90 | 120 | 90 | P50x>10 | 60 | 21 | 16  
TH-120X120 | 120 | 120 | P50x>10 | 90 | 21 | 16  

**Series and model** | **A** | **B** | **C** | **D** | **E** | **F**  
---|---|---|---|---|---|---  
TH-150X30 | 150 | 30 | P65x>13 | 30 | 6 | 11  
TH-150X60 | 150 | 60 | P65x>13 | 60 | 6 | 11  
TH-150X90 | 150 | 90 | P65x>13 | 90 | 21 | 11  
TH-180X30 | 180 | 30 | P80x>16 | 30 | 6 | 11  
TH-180X60 | 180 | 60 | P80x>16 | 60 | 6 | 11  
TH-180X90 | 180 | 90 | P80x>16 | 90 | 21 | 11  
TH-180X120 | 180 | 120 | P80x>16 | 90 | 21 | 16  
TH-180X150 | 180 | 150 | P80x>16 | 90 | 21 | 16  
TH-210X30 | 210 | 30 | P95x>19 | 30 | 6 | 11  
TH-210X60 | 210 | 60 | P95x>19 | 60 | 6 | 11  
TH-210X90 | 210 | 90 | P95x>19 | 90 | 21 | 11  
TH-210X120 | 210 | 120 | P95x>19 | 90 | 21 | 16  
TH-210X150 | 210 | 150 | P95x>19 | 90 | 21 | 16  
TH-210X180 | 210 | 180 | P95x>19 | 150 | 6 | 16  

## Models with an EL Connector (Power Consumption of 47 W or Higher)

**Series and model** | **A** | **B** | **C** | **D** | **E** | **F**  
---|---|---|---|---|---|---  
TH-150X30 | 150 | 150 | P65x>13 | 120 | 6 | 16  
TH-180X30 | 180 | 150 | P80x>16 | 120 | 6 | 16  
TH-180X180 | 180 | 180 | P80x>16 | 150 | 6 | 16  
TH-210X30 | 210 | 120 | P95x>19 | 90 | 6 | 16  
TH-210X180 | 210 | 180 | P95x>19 | 150 | 6 | 16  

**Series and model** | **A** | **B** | **C** | **D** | **E** | **F**  
---|---|---|---|---|---|---  
TH-210X210 | 210 | 210 | P95x>19 | 180 | 6 | 16  
TH-240X120 | 240 | 120 | P110x>22 | 90 | 6 | 16  
TH-240X180 | 240 | 180 | P110x>22 | 150 | 6 | 16  
TH-270X120 | 270 | 120 | P125x>25 | 90 | 6 | 16  
TH-270X180 | 270 | 180 | P125x>25 | 150 | 6 | 16  
TH-270X210 | 270 | 210 | P125x>25 | 180 | 6 | 16  

**Series and model** | **A** | **B** | **C** | **D**  
---|---|---|---|---  
TH-270X120 | 270 | 120 | P125x>25 | 90  
TH-270X150 | 270 | 150 | P125x>25 | 120  
TH-270X180 | 270 | 180 | P125x>25 | 150  
TH-270X210 | 270 | 210 | P125x>25 | 180  

**Units:** (Unit: mm)
**OPTIONAL ACCESSORIES**

### Light Control Films
- Improves parallelism of light to reduce light diffraction.

### Model name | Applicable Light Units
---|---
BK-TH-LE12 | TH2 Series
LC-TH-27X27-HO | TH2-27X27
LC-TH-27X27-VE | TH2-27X27
LC-TH-43X35-HO | TH2-43X35
LC-TH-43X35-VE | TH2-43X35
LC-TH-51X51-HO | TH2-51X51
LC-TH-51X51-VE | TH2-51X51
LC-TH-63X60-HO | TH2-63X60
LC-TH-63X60-VE | TH2-63X60

### Model name | Applicable Light Units
---|---
LC-TH-83X75-HO | TH2-83X75
LC-TH-83X75-VE | TH2-83X75
LC-TH-100X100-HO | TH2-100X100
LC-TH-100X100-VE | TH2-100X100
LC-TH-140X105-HO | TH2-140X105
LC-TH-140X105-VE | TH2-140X105
LC-TH-160X120-HO | TH2-160X120
LC-TH-160X120-VE | TH2-160X120

### Model name | Applicable Light Units
---|---
LC-TH-200X150-HO | TH2-200X150
LC-TH-200X150-VE | TH2-200X150
LC-TH-224X170-HO | TH2-224X170
LC-TH-224X170-VE | TH2-224X170
LC-TH-211X200-HO | TH2-211X200
LC-TH-211X200-VE | TH2-211X200

### Brackets
- Secures the Light Units.

### Imaging example
- Imaging the appearance of metal round bar

### Installation example
- Light Control Film

### Installation with brackets
- M3 nut

Note: These accessories are not applicable to the high-directivity-, large-, or camera-window-type Light Units.

### Periodically inspect optional products such as polarization and diffusion plates as all of these are consumables. Replace any products that show discoloration or deformation during inspection.

### CAUTION
- To ensure proper and safe use of the product, please read the Instruction Guide completely before using the product.
- The design and specifications of this product are subject to change without notification for product improvement.
- The workpiece imaging examples included in this pamphlet are intended to serve only as references to help you select a suitable Light Unit. Please verify the functionality and conditions required for your particular application before you make a final selection. The sample workpieces used in this pamphlet have been processed specifically for sample imaging. They are not intended to represent product quality and performance.

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