

### Silhouette inspection of an object using uniform lighting

Power-saving Flat Lights with a compact design.

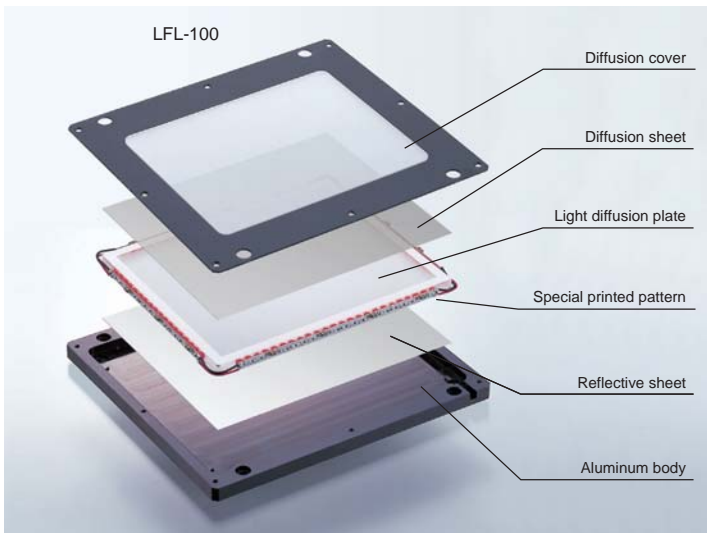


#### Flat Lights with Unique Light-guiding Technology

The use of a unique CCS light-guiding method realized to irradiate uniform diffused light.

#### Lightweight, Thin Design with Low Power Consumption

With a thin design allows installing this light in any place.



Allocated LEDs are fixed around the periphery of the Diffusion Plate with a transparent fixing material. This unique structure makes more complex to reflect and scatter the light from LEDs and it makes possible to irradiate uniform diffused light from flat light emitting surface.

Inspecting for defects in rectangular PET bottles

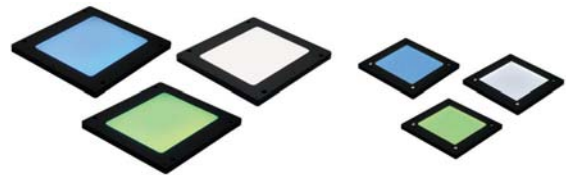


Inspecting the level of a liquid in bottles



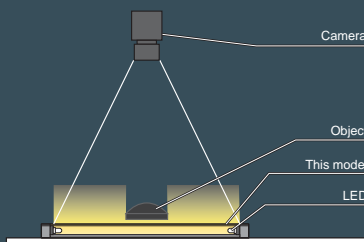
#### Varied Selection

A wide variety of sizes and colors are available to use for various applications. Models with a mounting panel (P) for installing lights are also available.



#### Illumination Structure of LFL-100

Light from the LEDs that are arranged around the periphery of the light diffusion plate passes through the plate to produce uniform illumination.



#### Examples of Flat-light images

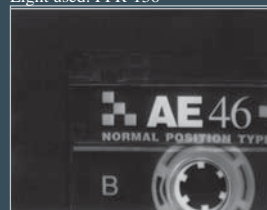
##### Inspecting printing on tape cassettes

Image as seen with the human eye in normal light.



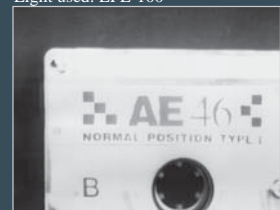
The entire object is evenly illuminated without shadows; however, internal parts are also being imaged and it makes inspection difficult.

Light used: FPR-136



The entire object is evenly illuminated and the printed surface stands out clearly.

Light used: LFL-100



## Product Lineup Table

| Series  | Direct Number | Model Name    | Color      | Power Consumption | Option     | Dimension |
|---------|---------------|---------------|------------|-------------------|------------|-----------|
| LFL     | 1005528       | LFL-612RD2    | ●          | 24V / 0.6W        | —          | 1         |
|         | 1004230       | LFL-612SW2    | ○          | 24V / 0.4W        |            |           |
|         | 1006130       | LFL-612BL2    | ●          |                   |            |           |
|         | 1001676       | LFL-612-BL    | TBD        |                   |            |           |
|         | 1006552       | LFL-612GR2    | ●          |                   |            |           |
|         | 1001679       | LFL-612-GR    | TBD        |                   |            |           |
|         | 1005529       | LFL-612RD2-P  | ●          |                   | 24V / 0.6W | —         |
|         | 1004231       | LFL-612SW2-P  | ○          | 24V / 0.4W        |            |           |
|         | 1006129       | LFL-612BL2-P  | ●          |                   |            |           |
|         | 1001677       | LFL-612-BL-P  | TBD        |                   |            |           |
|         | 1006595       | LFL-612GR2-P  | ●          |                   |            |           |
|         | 1001680       | LFL-612-GR-P  | TBD        |                   |            |           |
|         | 1005520       | LFL-1012RD2   | ●          |                   | 24V / 0.6W | —         |
|         | 1004225       | LFL-1012SW2   | ○          | 24V / 0.8W        |            |           |
|         | 1006126       | LFL-1012BL2   | ●          |                   |            |           |
|         | 1001570       | LFL-1012-BL   | TBD        |                   |            |           |
|         | —             | LFL-1012GR2   | ●          |                   |            |           |
|         | 1001573       | LFL-1012-GR   | TBD        |                   |            |           |
|         | 1005521       | LFL-1012RD2-P | ●          |                   | 24V / 0.6W | —         |
|         | 1004293       | LFL-1012SW2-P | ○          | 24V / 0.8W        |            |           |
|         | 1006127       | LFL-1012BL2-P | ●          |                   |            |           |
|         | 1001571       | LFL-1012-BL-P | TBD        |                   |            |           |
|         | 1006721       | LFL-1012GR2-P | ●          |                   |            |           |
|         | 1001574       | LFL-1012-GR-P | TBD        |                   |            |           |
|         | 1005524       | LFL-3212RD2   | ●          |                   | 24V / 1.6W | —         |
|         | 1004232       | LFL-3212SW2   | ○          | 24V / 2.3W        |            |           |
|         | —             | LFL-3212BL2   | ●          |                   |            |           |
|         | 1001634       | LFL-3212-BL   | TBD        |                   |            |           |
|         | —             | LFL-3212GR2   | ●          |                   |            |           |
|         | 1001635       | LFL-3212-GR   | TBD        |                   |            |           |
| 1005526 | LFL-4012RD2   | ●             | 24V / 2.1W |                   | —          | 6         |
| 1004228 | LFL-4012SW2   | ○             | 24V / 2.7W |                   |            |           |
| —       | LFL-4012BL2   | ●             |            |                   |            |           |
| 1001642 | LFL-4012-BL   | TBD           |            |                   |            |           |
| —       | LFL-4012GR2   | ●             |            |                   |            |           |
| 1001643 | LFL-4012-GR   | TBD           |            |                   |            |           |

| Series  | Direct Number | Model Name | Color     | Power Consumption | Option     | Dimension |
|---------|---------------|------------|-----------|-------------------|------------|-----------|
| LFL     | 1005527       | LFL-50RD2  | ●         | 24V / 2.1W        | —          | 7         |
|         | 1004229       | LFL-50SW2  | ○         | 24V / 3.1W        |            |           |
|         | 1006128       | LFL-50BL2  | ●         |                   |            |           |
|         | 1001654       | LFL-50-BL  | TBD       |                   |            |           |
|         | —             | LFL-50GR2  | ●         |                   |            |           |
|         | 1001655       | LFL-50-GR  | TBD       |                   |            |           |
|         | 1005519       | LFL-100RD2 | ●         |                   | 24V / 5.1W | L         |
|         | 1004226       | LFL-100SW2 | ○         | 24V / 5.3W        |            |           |
|         | 1006131       | LFL-100BL2 | ●         |                   |            |           |
|         | 1001558       | LFL-100-BL | TBD       |                   |            |           |
|         | 1006134       | LFL-100GR2 | ●         |                   |            |           |
|         | 1001559       | LFL-100-GR | TBD       |                   |            |           |
|         | 1005522       | LFL-180RD2 | ●         |                   | 24V / 7.1W | L         |
|         | 1004223       | LFL-180SW2 | ○         | 24V / 9.1W        |            |           |
|         | —             | LFL-180BL2 | ●         |                   |            |           |
|         | 1001598       | LFL-180-BL | TBD       |                   |            |           |
|         | —             | LFL-180GR2 | ●         |                   |            |           |
|         | 1001599       | LFL-180-GR | TBD       |                   |            |           |
|         | 1005523       | LFL-200RD2 | ●         |                   | 24V / 12W  | L         |
|         | 1004224       | LFL-200SW2 | ○         |                   |            |           |
|         | 1006132       | LFL-200BL2 | ●         |                   |            |           |
|         | 1001607       | LFL-200-BL | TBD       |                   |            |           |
|         | —             | LFL-200GR2 | ●         |                   |            |           |
|         | 1003050       | LFL-200-GR | TBD       |                   |            |           |
| 1005525 | LFL-360RD2    | ●          | 24V / 30W | —                 | 11         |           |
| 1004227 | LFL-360SW2    | ○          | 24V / 37W |                   |            |           |
| 1006133 | LFL-360BL2    | ●          |           |                   |            |           |
| 1003567 | LFL-360-BL    | TBD        |           |                   |            |           |

Products with the "TBD" mark are scheduled to be discontinued. Refer to the discontinued product information on the CCS website for specific discontinuation schedules.

\*The following letters indicate options.

L: Light Control Film

\*For further details on these options, refer to page 104.

## Dimension Diagrams (Unit: mm)

