Bar Light
LDLB Series

- Long-distance irradiation
- Switchable between overdrive lighting and constant lighting
- Built-in Controller
- Collective control of daisy-chain Lighting Units
- External light intensity control and ON/OFF control
- Waterproof model available

Application Examples
- Automotive: Checking for deposits of adhesive on door panels
- Packaging: Checking for cardboard inside beverage packages
- Traceability: Reading barcodes on a moving conveyor to verify products
- Shipping: Reading barcodes on pallets of bottles to verify the load count
- Inspection for the existence of engine parts
Features

**Long-distance irradiation**

Just one Lighting Unit provides both constant lighting and overdrive lighting.

![Illuminance change graph](image)

**Applications**

Inspections in pharmaceutical industry

**Presence of tablets**

![Image of tablets inspection](image)

Inspections in packaging industry

**Bottle cap appearance and tightening**

![Image of bottle cap inspection](image)

Inspections in automotive industry

**Surfaces of transmission parts**

- Oil pump rotors
- Gears
- Shafts and others

**Presence of engine parts**

- Mounting screws for head covers
- Oil caps
- Oil filters and others

**Positions of holes on door parts**

- Mounting holes for door locks
- Mounting holes for door knobs
- Mounting holes for side mirrors and others

Inspections in textile industry

**Foreign matter and blots on and breaks in non-woven fabric**

![Image of non-woven fabric inspection](image)

Inspections in foodstuff industry

**Size of fruit**

![Image of fruit inspection](image)

* Operating time of the overdrive lighting depends on the light intensity. Refer to the Instruction Guide for details.

* Select either a sinking (NPN) or sourcing (PNP) input for the control signals to matches your environment.

* The illustrations above are conceptual images.
**Daisy-chain connections**

You can daisy-chain up to three Light Units with a high degree of layout freedom.

**IP67-level waterproofing**

A waterproof model is available that is ideal for production lines that are regularly cleaned.

**Built-in Controller**

You can easily operate the Light Unit from the control panel.

- **Constant lighting mode**
- **Overdrive mode**

Hold down two buttons to change the operating mode between constant lighting and overdrive lighting.

**Data**

**LDLB-300SW (White)**

**Relative illuminance graph**

- Long side
- Short side

**Uniformity graph (Relative irradiance)**

- Irradiation distance: 500 mm
- Irradiation distance: 1,000 mm
- Irradiation distance: 2,000 mm

*This data is for reference only and does not guarantee product quality.*

**LDLB-300RD (Red)**

**Relative illuminance graph**

- Long side
- Short side

**Uniformity graph (Relative irradiance)**

- Irradiation distance: 500 mm
- Irradiation distance: 1,000 mm
- Irradiation distance: 2,000 mm

*This data is for reference only and does not guarantee product quality.*
Common specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>LDBL series</th>
<th>LDBL-IP series (waterproof)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model name</td>
<td>LDBL-300SW-N LDBL-300RD-N</td>
<td>LDBL-IP300SW-N LDBL-IP300RD-N</td>
</tr>
<tr>
<td>Protective structure</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>LED color</td>
<td>White</td>
<td>Red</td>
</tr>
<tr>
<td>Correlated color temp. (°C)</td>
<td>6, 100 K</td>
<td>–</td>
</tr>
<tr>
<td>Peak wavelength</td>
<td>–</td>
<td>630 nm</td>
</tr>
<tr>
<td>Power consumption (max.)</td>
<td>31 W</td>
<td>24 W</td>
</tr>
<tr>
<td>Cable permitted bending radius</td>
<td>25.5 mm</td>
<td></td>
</tr>
</tbody>
</table>

ON/OFF control: External signal input to turn ON the Light

Both sinking (NPN) and sourcing (PNP) input are available. You can switch the logic for turning the light ON and OFF.

Options

Input cable
This cable supplies power to the Light Unit and inputs signals for light intensity control or to turn the light ON and OFF.

Linking cable
This cable is used to daisy-chain Light Units.

System configuration example

Example: Daisy-chaining three Light Units

<table>
<thead>
<tr>
<th>Number of Light Units connected in Constant Lighting Mode</th>
<th>Number of Light Units connected in Override Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 m</td>
<td>10 m</td>
</tr>
<tr>
<td>7 m</td>
<td>7 m</td>
</tr>
<tr>
<td>4.5 m</td>
<td>4.5 m</td>
</tr>
<tr>
<td>3 m</td>
<td>3 m</td>
</tr>
<tr>
<td>3 m</td>
<td>3 m</td>
</tr>
<tr>
<td>1 m</td>
<td>1 m</td>
</tr>
<tr>
<td>Cannot be used.</td>
<td>The table gives the maximum length of the Input Cable</td>
</tr>
<tr>
<td>The table gives the maximum total length of the Input Cable and Link Cables.</td>
<td></td>
</tr>
</tbody>
</table>

Maximum length of optional cables

<table>
<thead>
<tr>
<th>Model</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEBC-1-M12-5F</td>
<td>1 m</td>
<td>55 g max.</td>
</tr>
<tr>
<td>FEBC-2-M12-5F</td>
<td>2 m</td>
<td>90 g max.</td>
</tr>
<tr>
<td>FEBC-3-M12-5F</td>
<td>3 m</td>
<td>130 g max.</td>
</tr>
<tr>
<td>FEBC-5-M12-5F</td>
<td>5 m</td>
<td>210 g max.</td>
</tr>
<tr>
<td>FEBC-0.6-M12-5M-5F</td>
<td>0.6 m</td>
<td>50 g max.</td>
</tr>
</tbody>
</table>

Dimensions (mm)

LDLB series

<table>
<thead>
<tr>
<th>Model</th>
<th>Top view</th>
<th>Operating Panel</th>
<th>Output Connector (M12 Plug)</th>
<th>Sealing Cap: PROT-M12 (PHOENIX CONTACT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDBL-300SW-N</td>
<td>10</td>
<td>300 (Emitting surface)</td>
<td>4 x Ø4.5 (For LDLB-IP Series)</td>
<td></td>
</tr>
</tbody>
</table>

Options

Input cable
This cable supplies power to the Light Unit and inputs signals for light intensity control or to turn the light ON and OFF.

Linking cable
This cable is used to daisy-chain Light Units.

System configuration example

Example: Daisy-chaining three Light Units

<table>
<thead>
<tr>
<th>Power supply</th>
<th>External equipment such as a PLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>External equipment</td>
<td>Input cable (FECB-n-M12-5F)</td>
</tr>
<tr>
<td>Linking cables x2</td>
<td>(FECB-0.6-M12-5M-5F)</td>
</tr>
</tbody>
</table>

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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