

Direct Lighting

Bar Lights

LDLB Series

Bar Light with built-in Controller and lineup with waterproof types

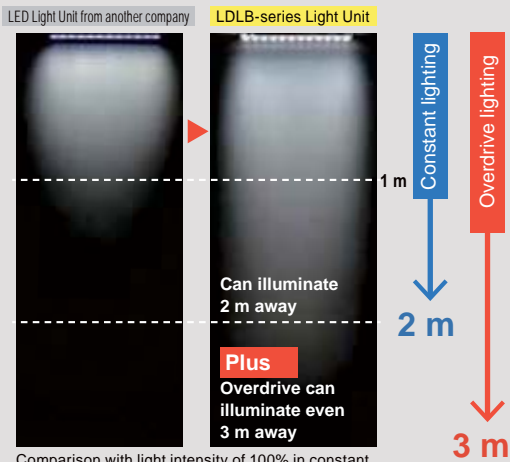


Applications

Light source for robotic picking, visual inspection for beverage packages, mixed models inspection for various parts, inspection for missing mounted parts, visual inspection for large workpieces, etc.

Overdrive Can Illuminate Even 3 m Away

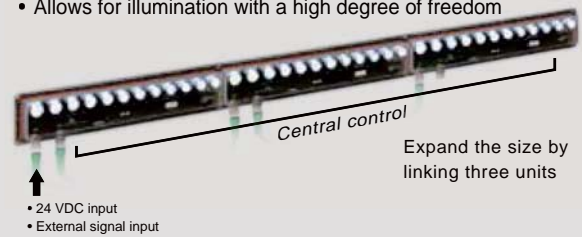
Just one Light Unit provides both constant lighting and overdrive lighting.



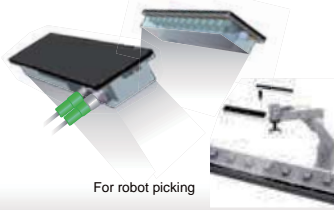
Comparison with light intensity of 100% in constant lighting mode

Can Be Connected in a Daisy-Chain

- Connect up to three units
- Centrally control the chain externally
- Allows for illumination with a high degree of freedom



Example connection 1 Simultaneous illumination with 2 units

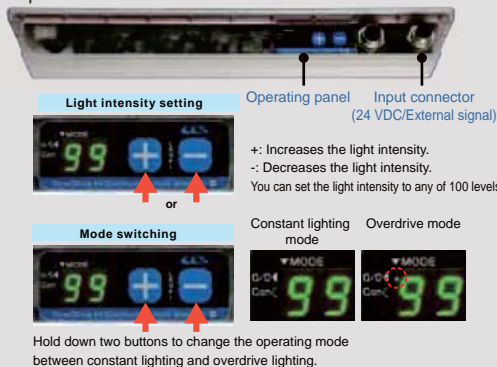


Example connection 2 Simultaneous illumination with 3 units



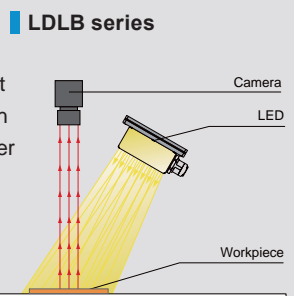
Built-In Controller, 24 VDC Input

The Controller is built-in, so you don't need a Control Unit for light control. You can set intensity values and switch modes by panel operations.



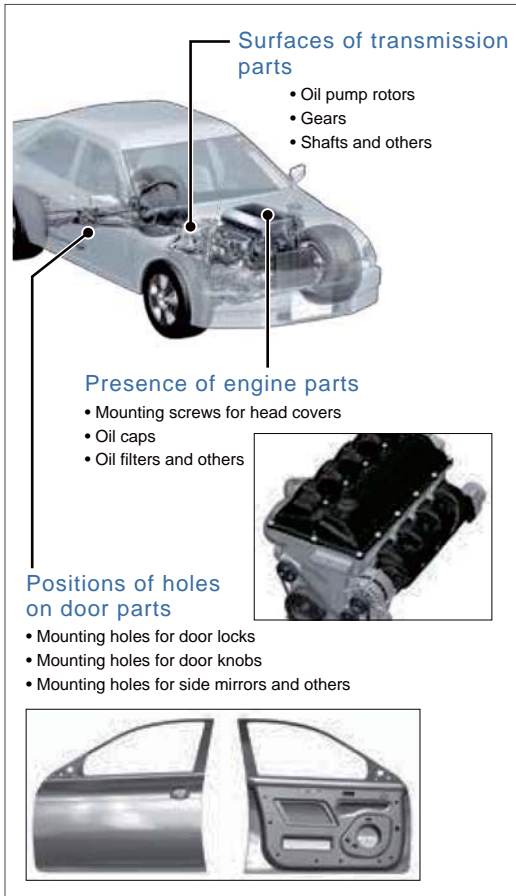
Example Configuration

Bar Light with built-in Controller. Allows for long-distance illumination perfect for large workpieces. Switch to overdrive for even brighter illumination.

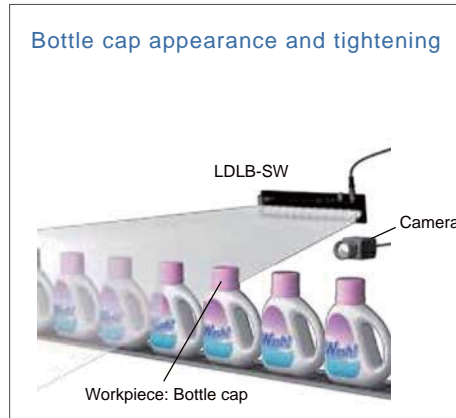


## Applications

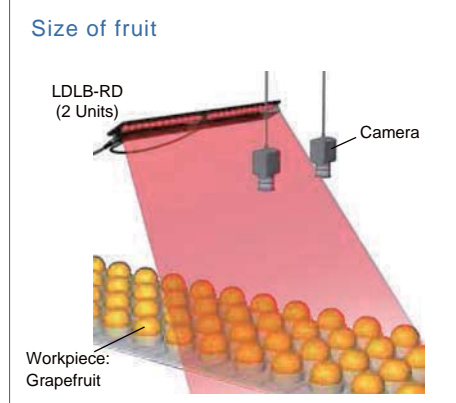
### Inspections in automotive industry



### Inspections in packaging industry



### Inspections in foodstuff industry



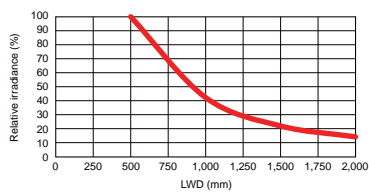
## Data: Relative Irradiance Graph and Uniformity (Representative Example)

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

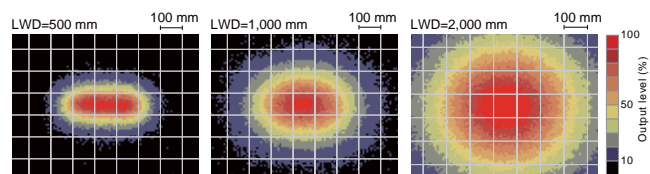
### LDLB-300RD-N (Red)

#### Relative irradiance graph<sup>\*1</sup> (LWD characteristics)<sup>\*2</sup>

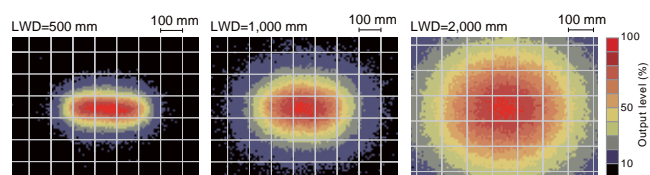
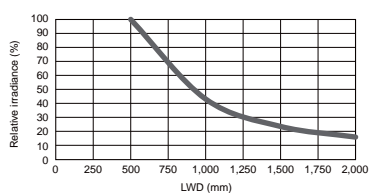
\*1 Irradiance on the optical axis  
\*2 Illuminating distance from the Light Unit to the workpiece



#### Uniformity (Relative irradiance)



### LDLB-300SW-N (White)



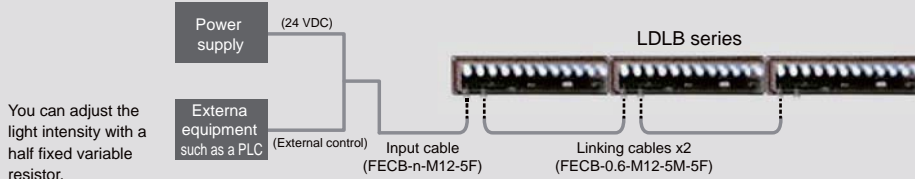
Direct Lighting	LDR2
	LDR2-LA
	LDR-LA1
	SQR
	SQR-TP
Diffused Lighting	HPR2
	LFR
	LKR
	FPR
	FFQ2
Direct Lighting	LDL2
	LDLB
	HLDL2
	HL
	TH2 (5 types)
	TH
	LFL
	HPD2
	LDM2
	LAV
	PDM
	LFX3
	LFX3-PT
	LFV3
Diffused Lighting	MSU
	MFU
Coaxial Lighting	PF
Strobe Lighting	HLDR-IP/ HSL-PCL
Water-proof Lighting	UV2
	UV
Ultraviolet Lighting	LNSP-UV-FN
Infrared Lighting	IR2
Intensity Control Lighting	IU
Spot Lighting, Etc.	HLV3
	HLV2
	LV
	LSP
	HFS/HFR
	HLV3-NR
	HLV3-3M-RGB-4
	HLV2-NR
	HLV2-3M-RGB-3W
	PFBR
	PFB3
	PFB2
Convergent Lighting	LNLP
	LNSP2
	LNSP
	Coaxial Units
	LNSP-FN
	LN/LN-HK
Diffused Lighting	LNSD
	LND2
	HLND
	LT
	LVN
Oblique-Angled Lighting	LNDG
	LNS2
	LNIS
	LNIS-FN
Lenses	Telecentric Lens
	Macro Lens

# LDLB Series



## System Configuration Example

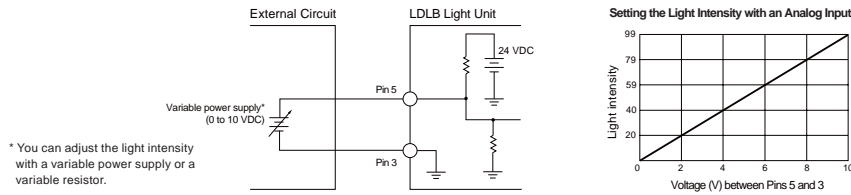
**Example: Daisy-chaining three Light Units**



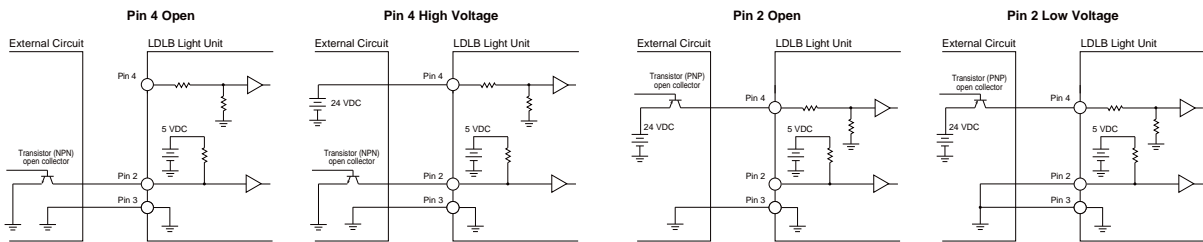
## Connection Example

Refer to the Instruction Guide for details.

### External control of light intensity



### ON/OFF Inputs With these Light Units, you can use a sinking input (NPN) or a sourcing input (PNP).



Logic Table

Logic switching	Pin 4	Open		High voltage	
Signal input	Pin 2 (NPN)	Open	Low voltage	Open	Low voltage
Operating mode	Constant Lighting Mode	Lit.	Not lit.	Not lit.	Lit.
Operating mode	Overdrive Mode	Not lit.	Lit.	Lit.	Not lit.

Refer to the following table for the low and high voltages.

Pin	Signal input status	Range
Pin 2 (NPN)	Low voltage	0 to 1.1 VDC
Pin 4	High voltage	20.7 to 26.4 VDC

Logic Table

Logic switching	Pin 2	Open		Low voltage	
Signal input	Pin 4 (PNP)	Open	High voltage	Open	High voltage
Operating mode	Constant Lighting Mode	Lit.	Not lit.	Not lit.	Lit.
Operating mode	Overdrive Mode	Not lit.	Lit.	Lit.	Not lit.

Refer to the following table for the low and high voltages.

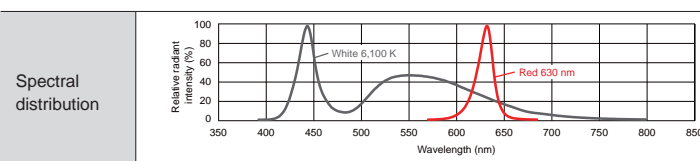
Pin	Signal input status	Range
Pin 2	Low voltage	0 to 1.1 VDC
Pin 4 (PNP)	High voltage	20.7 to 26.4 VDC

## Lineup

Model name	Protective structure	LED color	Power consumption	Input voltage (rated)	Input voltage (range)	Peak wavelength / correlated color temperature	Input/output connectors	Optional cables	Weight
LDLB-300RD-N	—	Red	24 W	24 VDC	22.8 to 26.4 VDC	630 nm	M12 connector	FECB-M12-5F Input Cable	500 g
LDLB-300SW-N		White	31 W			6,100 K		FECB-0.6-M12-5F Link Cable	
LDLB-IP-300RD-N	IP67 compliant (JIS C 0920)	Red	24 W	24 VDC	22.8 to 26.4 VDC	630 nm	M12 connector	FECB-0.6-M12-5F Link Cable	
LDLB-IP-300SW-N		White	31 W			6,100 K			

Optional Cables ▶ P.60

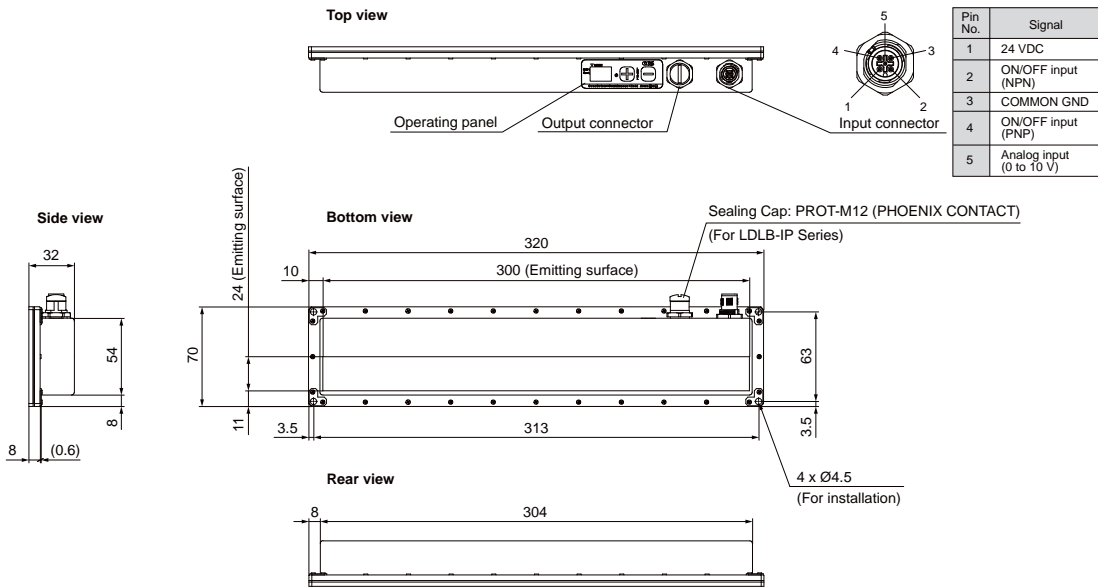
## Common Specifications



Offers you the most suitable lens filter for each wavelength. For details about the lens filter, refer to P.299.

Be sure to read the "Instruction Guide" included with the product before use and follow the safety precautions upon use. The data included is for reference only. Actual values may vary.

## Dimensions (mm)



## Optional Cables

### Input cable

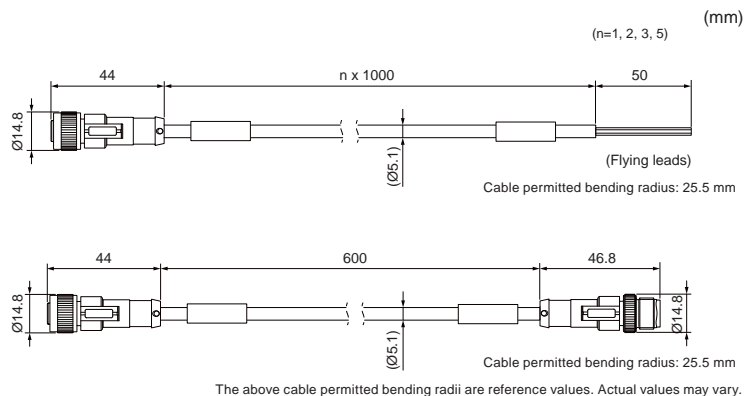
Model name	Length	Weight
FECB-1-M12-5F	1 m	55 g
FECB-2-M12-5F	2 m	90 g
FECB-3-M12-5F	3 m	130 g
FECB-5-M12-5F	5 m	210 g

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

### Link cable

Model name	Length	Weight
FECB-0.6-M12-5M-5F	0.6 m	50 g

This cable is used to daisy-chain Light Units.



## Maximum Length of Optional Cables

Number of Light Units connected in Constant Lighting Mode			Number of Light Units	Description
1	2	3		
10 m	7 m	4.5 m	1	The table gives the maximum length of the Input Cable.
Number of Light Units connected in Overdrive Mode			2 or 3	The table gives the maximum total length of the Input Cable and Link Cables.
1	2	3		
3 m	1 m	Cannot be used.		

## Cautionary Information regarding Waterproofing

- Handle the Light Unit and connectors with care. Do not deform or damage the connectors.
- Connect the cables correctly to the Light Units.
- Connect a Sealing Cap to any output connectors to which a cable is not connected to maintain water resistance. The Sealing Cap is connected to the output connector when the Light Unit is shipped.
- If the Light Unit is not used for a long period of time with the cable disconnected, attach the Cap to the connector.
- After cleaning manufacturing lines, be sure to wipe away any moisture remaining on the emitting surface. Imaging can be affected by moisture on the emitting surface.
- Use water to wash away any cleaning agent adhered to this product.
- Use water to wash away any oils or chemicals adhered to this product.

## Note

### "IP67" indicates the level of protection against foreign material entering electrical instruments

The 1st numeral "6" indicates the following level of protection:

- No dust inside the instrument. (dustproof)

The 2nd numeral "7" indicates the following level of protection:

- No damage when submerged in water at the rated pressure for the rated time. (watertight type)
- Can be submerged in water to a depth of 1 m (for instruments with a height of less than 850 mm) for 30 minutes.

Direct Lighting	LDR2 LDR2-LA LDR-LA1 SQR SQR-TP
Diffused Lighting	HPR2 LFR LKR FPR FFQ2
Direct Lighting	LDL2 LDLB HLDL2 HL
Diffused Lighting	TH2 (5 types) TH LFL HPD2 LDM2 LAV PDM LFX3 LFX3-PT LFV3
Coaxial Lighting	MSU MFU
Strobe Lighting	PF
Water-proof	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV LNSP-UV-FN
Intensity Control Lighting	IR2 IU
Spot Lighting, Etc.	HLV3 HLV2 LV LSP HFS/HFR HLV3-NR HLV3-3M-RGB-4 HLV2-NR HLV2-3M-RGB-3W PFB3 PFB2
Convergent Lighting	LNLP LNSP2 LNSP Coaxial Units LNSP-FN LN/LN-HK
Diffused Lighting	LNSD LND2 HLND LT LNV
Oblique-Angled Lighting	LNDG LNS2 LNS LNS-FN
Lenses	Telecentric Lens Macro Lens