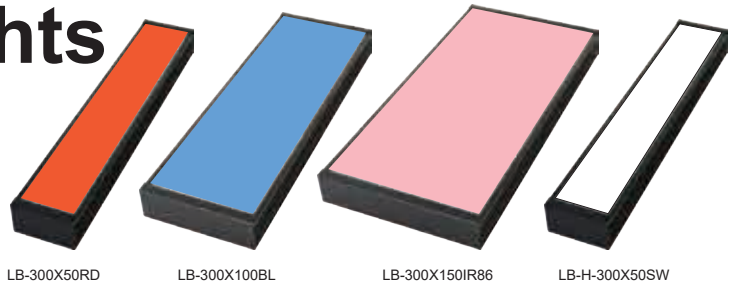


# Diffused Bar Lights LB Series

Standard Type

High Power Type



LB-300X50RD

LB-300X100BL

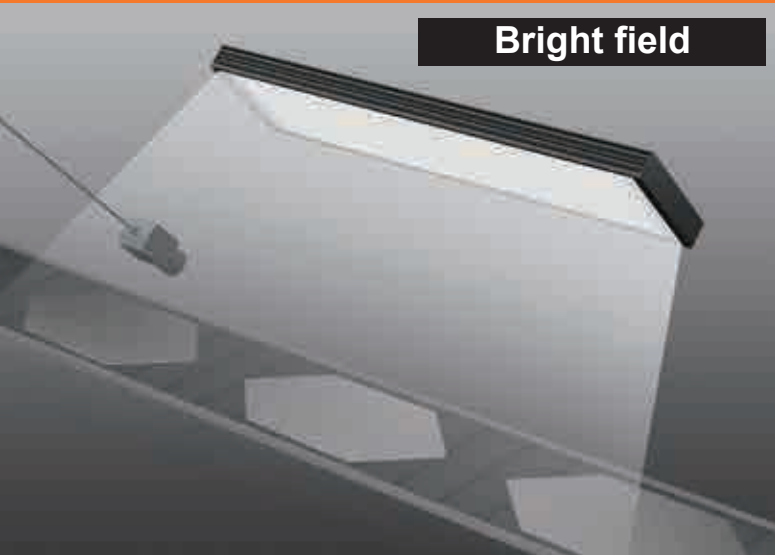
LB-300X150IR86

LB-H-300X50SW

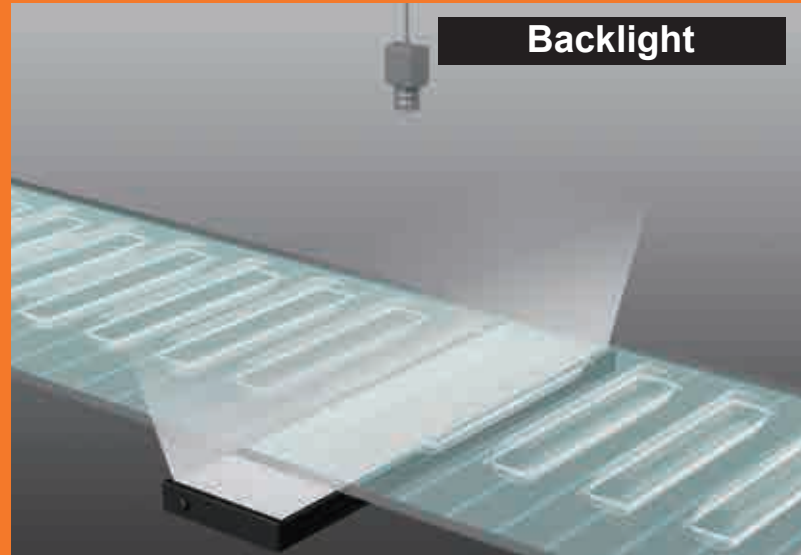
## Multipurpose x Multiple Models **338** Models Total

A wide variety of lighting options are available to match the inspection environment

Bright field



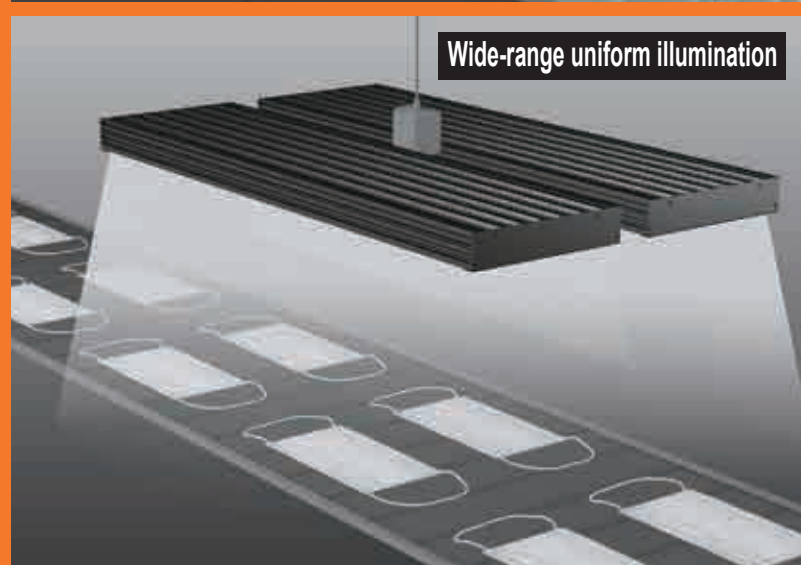
Backlight



Diffused dome illumination



Wide-range uniform illumination

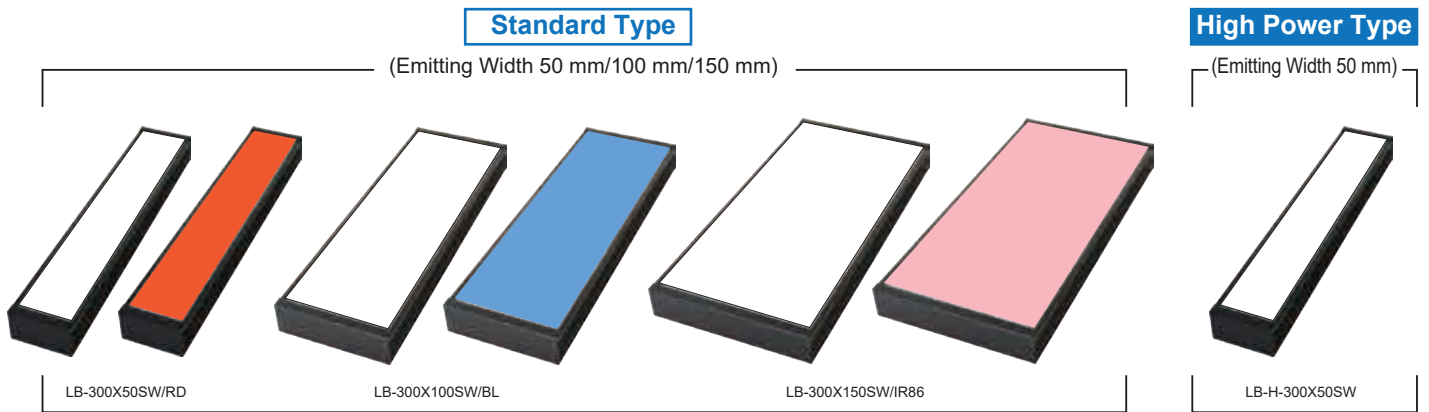


# LB Series Diffused Bar Lights

Wide emitting surface

## Uniform diffused lighting

Uniform diffused illumination provides solutions for various applications and industries such as backlighting, bright field inspection, etc.

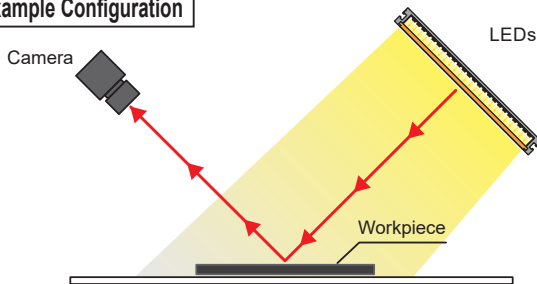


## Application Examples Various uses depending on the application

### Bright field

- Visual inspection of rectangular workpieces
- Visual inspection of satin metal
- Various foreign contamination, presence inspection, etc.

#### Example Configuration



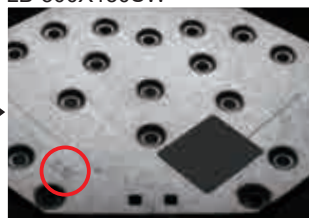
Diffused lighting is illuminated from an angle, and the specular reflection light is observed. Light emitting surface width can be selected to match the workpiece and characteristics.

#### Satin metal sheet ID mark inspection

Workpiece: Satin metal plate



LB-300X150SW

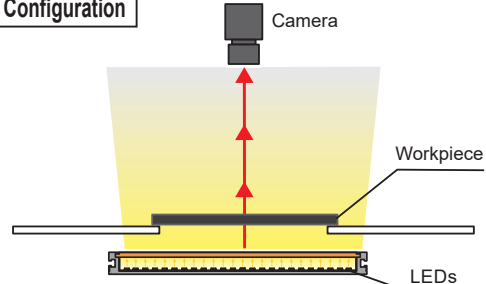


Uniform illumination of wide satin surfaces for clear ID mark imaging.

### Backlight

- Cylindrical container liquid level inspection
- Foreign contamination inspection on sheet
- Film scratch inspection, etc.

#### Example Configuration



Diffused lighting is illuminated from the back of the workpiece. Suitable for translucent container foreign contamination inspection. liquid level inspection. silhouette inspection, etc.

#### Transparent container stain inspection

Workpiece: Transparent container



LB-300X150SW



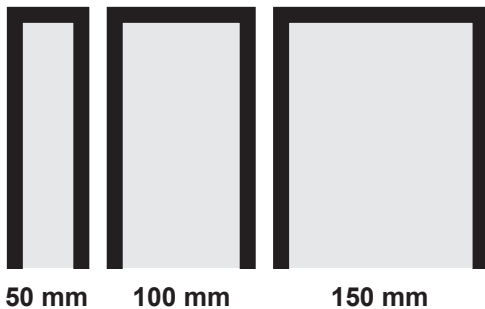
Uniform diffused lighting illumination from a wide light emitting surface minimizes the effect of unevenness and clearly images stains.

# Total of 338 Models **Wide lineup** Choose emitting width, wavelength, and size

<b>Standard Type</b>	<b>Emitting Width</b> <b>3 Types</b> 50/100/150 mm	<b>LED Colors</b> <b>4 Types</b> Red/White/Blue/Infrared	<b>Size</b> <b>26 Types</b> Light emitting surface length 200 mm to 2700 mm	= <b>312 Models</b>
<b>High Power Type</b>	<b>Emitting Width</b> <b>1 Type</b> 50 mm	<b>LED Colors</b> <b>1 Type</b> White	<b>Size</b> <b>26 Types</b> Light emitting surface length 200 mm to 2700 mm	= <b>26 Models*</b>

\*1 High power type is only available in emitting width 50 mm, white.

## Choose from 3 emitting widths

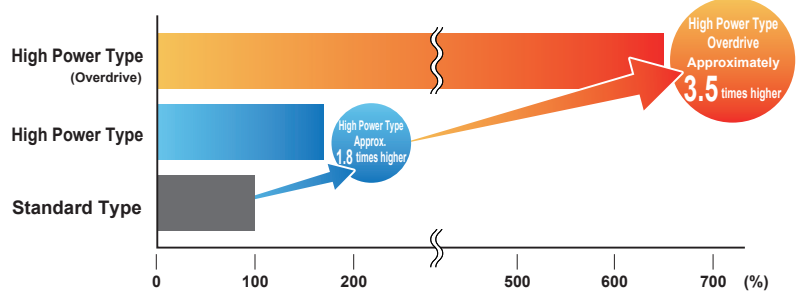


Three emitting widths (50 mm, 100 mm, and 150 mm) can be selected according to the application.

\*High power type is only available with an emitting width of 50 mm.

## High power type with overdrive also available

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



Measurement conditions: 100% intensity, LWD 50 mm, irradiance comparison between LB-300X50SW and LB-H-300X50SW

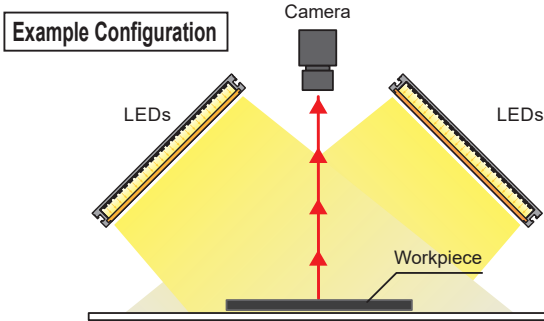
Overdrive is only available for high power type sizes 200 to 700.

Model: LB-H-□□X50SW [□□=200 to 700]

For information on the combination of light units and POD Series control units, please refer to our website. <https://www.ccs-grp.com/lnk/qr/pod>

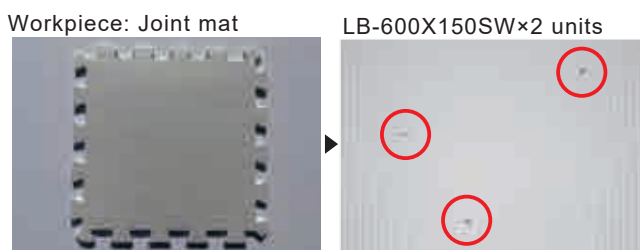
## Diffused dome illumination

- Visual inspection of electronic components
- Stain inspection of non-woven fabrics, etc.



Uniform diffused lighting is illuminated from 2 directions to reproduce the dome effect. Images can be captured with minimal shading and halation effects on uneven surfaces.

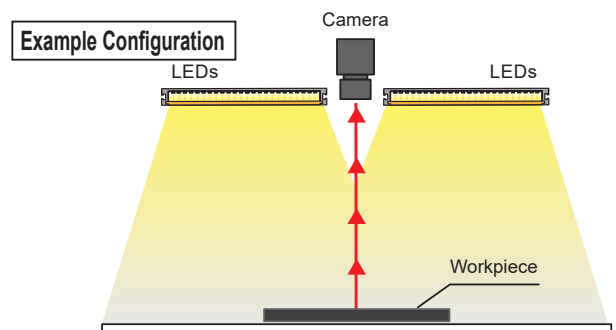
### Scratch inspection of uneven mats



Clear imaging of scratches by suppressing shadows on uneven surfaces.

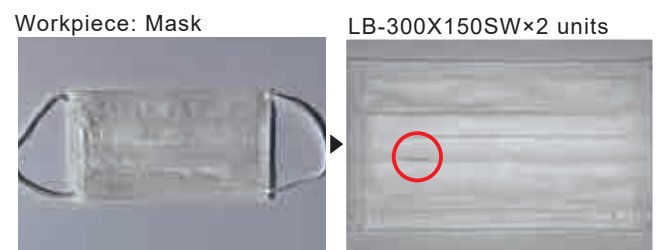
## Wide-range uniform illumination

- Sealant coating inspection
- Print inspection on satin metal
- Lighting for robot picking, etc.



Uniform diffused lighting is illuminated on the same axis as the camera. Also effective for wide-area imaging, such as wide workpieces, etc.

### Foreign contamination inspection of non-woven fabrics



Clear imaging of foreign contamination that overlaps the shadows of the seams.

Standard Type

Emitting Width	Model Name <sup>*1</sup>	Power Consumption				Options	Extension Cables	Recommended Control Units	Weight
		RD Red	SW White	BL Blue	IR86 Infrared				
50 mm	LB-200X50□□		18 W		10 W				470 g
	LB-300X50□□		27 W		15 W				610 g
	LB-400X50□□		36 W		20 W				750 g
	LB-500X50□□		45 W		24 W			PD4	890 g
	LB-600X50□□		54 W		29 W			PD3	1,030 g
	LB-700X50□□		63 W		34 W				1,170 g
	LB-800X50□□		72 W		39 W		FCB-EL2		1,310 g
	LB-900X50□□		81 W		44 W				1,450 g
	LB-1000X50□□		90 W		48 W				1,590 g
	LB-1100X50□□		99 W		53 W			PD4	1,730 g
	LB-1200X50□□		108 W		58 W	Diffusion Plates		PD3 <sup>*4</sup>	1,870 g
	LB-1300X50□□		117 W		63 W			*4 Can only use infrared.	2,010 g
	LB-1400X50□□		125 W		68 W	Polarizing Plates			2,150 g
	LB-1500X50□□		134 W		72 W			PD4 <sup>*4</sup>	2,290 g
	LB-1600X50□□		143 W		77 W			PD3 <sup>*4</sup>	2,430 g
	LB-1700X50□□		152 W		82 W	Protective Plates		PSB4	2,570 g
	LB-1800X50□□		161 W		87 W			*4 Can only use infrared.	2,710 g
	LB-1900X50□□		170 W		92 W				2,850 g
	LB-2000X50□□		179 W		96 W		FCB-EL2 <sup>*4</sup>		2,990 g
	100 mm	LB-200X100□□		36 W		20 W			
LB-300X100□□			54 W		29 W			PD4	1,010 g
LB-400X100□□			72 W		39 W			PD3	1,250 g
LB-500X100□□			90 W		48 W		FCB-EL2		1,490 g
LB-600X100□□			108 W		58 W			PD4 PD3 <sup>*4</sup>	1,730 g
LB-700X100□□			125 W		68 W			*4 Can only use infrared.	1,970 g
LB-800X100□□			143 W		77 W			PD4 <sup>*4</sup> PD3 <sup>*4</sup>	2,210 g
LB-900X100□□			161 W		87 W			PSB4	2,450 g
LB-1000X100□□			179 W		96 W			*4 Can only use infrared.	2,690 g
LB-1100X100□□			197 W		106 W		FCB-EL2 <sup>*4</sup>	PD4 <sup>*4</sup> PSB4	2,930 g
LB-1200X100□□			215 W		116 W	Diffusion Plates	FCB-125SQ-ME7 <sup>*5</sup>	*4 Can only use infrared.	3,170 g
LB-1300X100□□			233 W		125 W		FCB-20-2.0SQ-ME7 <sup>*5</sup>		3,410 g
LB-1400X100□□			250 W		135 W	Polarizing Plates		*4 Can only use infrared.	3,650 g
LB-1500X100□□			268 W		144 W			*5 Excluding infrared.	3,890 g
LB-1600X100□□			286 W		154 W	Protective Plates	FCB-125SQ-ME7		4,130 g
LB-1700X100□□			304 W		164 W		FCB-20-2.0SQ-ME7		4,370 g
LB-1800X100□□			322 W		173 W			PSB4	4,610 g
LB-1900X100□□			340 W		183 W				4,850 g
LB-2000X100□□			358 W		192 W				5,090 g
LB-2100X100□□			375 W		202 W		FCB-125SQ-ME7		5,330 g
LB-2200X100□□		393 W		212 W		FCB-20-2.0SQ-ME7		5,570 g	
LB-2300X100□□		411 W		221 W			*2 Requires 2 cables. (Excluding infrared)	5,810 g	
LB-2400X100□□		429 W		231 W				6,050 g	
LB-2500X100□□		447 W		240 W				6,290 g	
LB-2600X100□□		465 W		250 W				6,530 g	
LB-2700X100□□		483 W		260 W				6,770 g	

\*1 □□ in the model name contains the LED color. (RD: Red, SW: White, BL: Blue, IR86: Infrared)

\*2 Connect these connectors to the two output connectors that power the lighting on the same channel of the control unit. For example, for PSB4 Series control units, connect to the L1-1 and L1-2 output connectors. Use 2 extension cables of the same length. If the two extension cables are of different lengths, the different cable specs may lead to uneven light emission.

## Standard Type

Emitting Width	Model Name <sup>*1</sup>	Power Consumption				Options	Extension Cables	Recommended Control Units	Weight
		RD Red	SW White	BL Blue	IR86 Infrared				
150 mm	LB-200X150□□		54 W		29 W			PD4 PD3	1,030 g
	LB-300X150□□		81 W		44 W		FCB-EL2		1,350 g
	LB-400X150□□		108 W		58 W			PD4 <sup>*4</sup> PD3 <sup>*4</sup>	1,670 g
	LB-500X150□□		134 W		72 W			PSB4	1,990 g
	LB-600X150□□		161 W		87 W		FCB-EL2 <sup>*4</sup>	<sup>*4</sup> Can only use infrared.	2,310 g
	LB-700X150□□		188 W		101 W		FCB-1.25SQ-ME7 <sup>*5</sup>	PD4 <sup>*4</sup> PSB4	2,630 g
	LB-800X150□□		215 W		116 W		FCB-20-2.0SQ-ME7 <sup>*5</sup>	<sup>*4</sup> Can only use infrared.	2,950 g
	LB-900X150□□		242 W		130 W		<sup>*4</sup> Can only use infrared. <sup>*5</sup> Excluding infrared.		3,270 g
	LB-1000X150□□		268 W		144 W				3,590 g
	LB-1100X150□□		295 W		159 W	Diffusion Plates	FCB-1.25SQ-ME7 FCB-20-2.0SQ-ME7		3,910 g
	LB-1200X150□□		322 W		173 W				4,230 g
	LB-1300X150□□		349 W		188 W	Polarizing Plates			4,550 g
	LB-1400X150□□		375 W		202 W		FCB-1.25SQ-ME7	PSB4	4,870 g
	LB-1500X150□□		402 W		216 W	Protective Plates	FCB-20-2.0SQ-ME7		5,190 g
	LB-1600X150□□		429 W		231 W				5,510 g
	LB-1700X150□□		456 W		245 W		<sup>*2</sup> Requires 2 cables. (Excluding infrared)		5,830 g
	LB-1800X150□□		483 W		260 W				6,150 g
	LB-1900X150□□		509 W		274 W				6,470 g
	LB-2000X150□□		536 W		288 W				6,790 g
	LB-2100X150□□		563 W		303 W		FCB-1.25SQ-ME7 FCB-20-2.0SQ-ME7		7,110 g
LB-2200X150□□		590 W		317 W		<sup>*2</sup> Requires 2 cables.		7,430 g	
LB-2300X150□□		617 W		332 W		FCB-1.25SQ-ME7		7,750 g	
LB-2400X150□□		643 W		346 W		FCB-20-2.0SQ-ME7	PSB4 <sup>*4</sup>	8,070 g	
LB-2500X150□□		670 W		360 W		<sup>*2</sup> Requires 2 cables.	<sup>*4</sup> Can only use infrared.	8,390 g	
LB-2600X150□□		697 W		375 W		<sup>*3</sup> Please contact us for control units with red, white, and blue light emitting colors.	<sup>*3</sup> Please contact us for control units with red, white, and blue light emitting colors.	8,710 g	
LB-2700X150□□		724 W		389 W				9,030 g	

<sup>\*3</sup> For extension cables and control units for LB-2300/2400/2500/2600/2700X150 (excluding infrared), please contact our sales representative.

## High Power Type

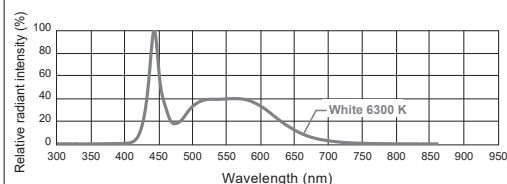
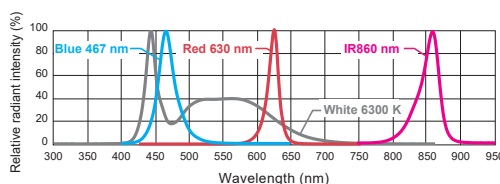
Emitting Width	Model Name	LED Emitting Color	Power Consumption	Options	Extension Cables	Recommended Control Units	Weight	
50 mm	LB-H-200X50SW	White	28 W				470 g	
	LB-H-300X50SW		42 W			PD4	610 g	
	LB-H-400X50SW		56 W				PD3	750 g
	LB-H-500X50SW		70 W				POD	890 g
	LB-H-600X50SW		84 W			FCB-EL2		1,030 g
	LB-H-700X50SW		98 W				PD4 PSB4 POD	1,170 g
	LB-H-800X50SW		112 W				PD4 PSB4	1,310 g
	LB-H-900X50SW		126 W					1,450 g
	LB-H-1000X50SW		140 W					1,590 g
	LB-H-1100X50SW		154 W			Diffusion Plates		1,730 g
	LB-H-1200X50SW		168 W					1,870 g
	LB-H-1300X50SW		181 W			Polarizing Plates		2,010 g
	LB-H-1400X50SW		195 W					2,150 g
	LB-H-1500X50SW		209 W			Protective Plates	FCB-1.25SQ-ME7	2,290 g
	LB-H-1600X50SW		223 W				FCB-20-2.0SQ-ME7	2,430 g
	LB-H-1700X50SW		237 W					2,570 g
	LB-H-1800X50SW		251 W					2,710 g
	LB-H-1900X50SW		265 W					2,850 g
	LB-H-2000X50SW		279 W					2,990 g
	LB-H-2100X50SW		293 W					3,130 g
	LB-H-2200X50SW		307 W					3,270 g
	LB-H-2300X50SW		321 W					3,410 g
	LB-H-2400X50SW		335 W				FCB-1.25SQ-ME7 FCB-20-2.0SQ-ME7	3,550 g
	LB-H-2500X150SW		348 W				<sup>*2</sup> Requires 2 cables.	3,690 g
	LB-H-2600X50SW		362 W					3,830 g
LB-H-2700X50SW	376 W					3,970 g		

<sup>\*3</sup> For information on the combination of light units and POD Series control units, please refer to our website. <https://www.ccs-grp.com/lnk/qr/pod>

## → Common Specifications

	Standard Type	High Power Type
Input voltage	DC 24 V	
LED emitting color	White Red Blue Infrared	White
Peak wavelength / correlated color temperature	White 6300 K Red 630 nm Blue 467 nm Infrared 860 nm	6300 K
Cable length	300 mm	
Operating environment (indoors only)	Temperature: 0 to 40°C, Humidity: 20 to 85% RH (with no condensation)	
Storage environment	Temperature: -20 to 60°C, Humidity: 20 to 85% RH (with no condensation)	
Cooling method	Natural air-cooling	
Case material	Aluminum alloy, steel sheet	
Compatible standards	CE, UKCA	
Applicable environmental standards	RoHS, REACH	

Spectral distribution



## → Relative Irradiance Graph and Uniformity

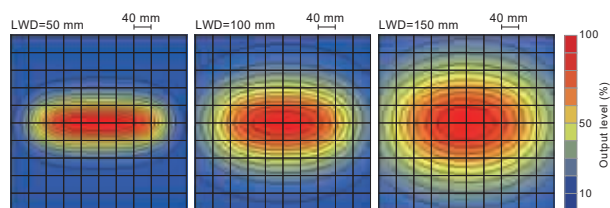
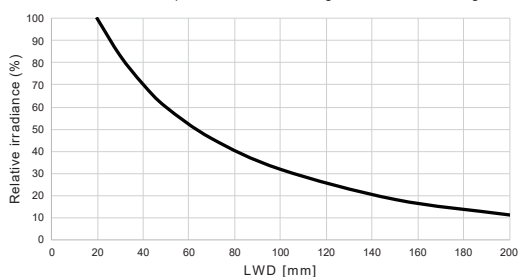
### Relative irradiance<sup>1</sup> graph (LWD<sup>2</sup> characteristics)

\*1 Irradiance on the optical axis \*2 Illuminating distance between the light unit and the workpiece

### Uniformity (Relative irradiance)

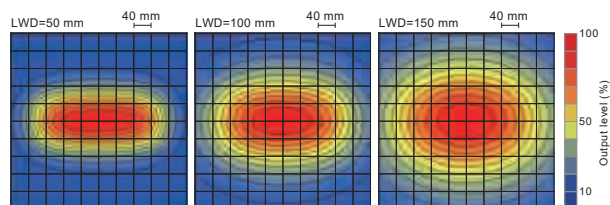
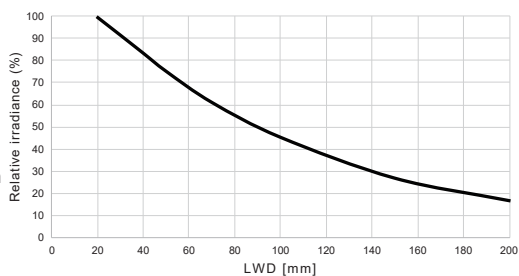
**LB-300X50SW**  
Standard Type

Emitting Width 50 mm



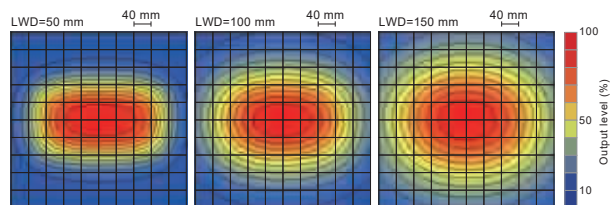
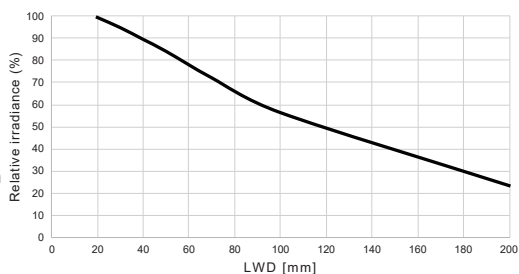
**LB-300X100SW**  
Standard Type

Emitting Width 100 mm



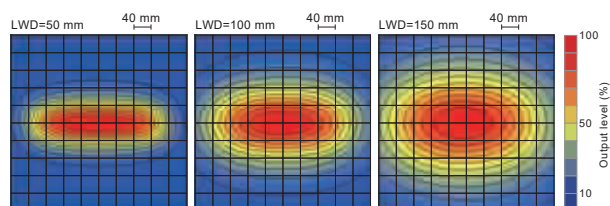
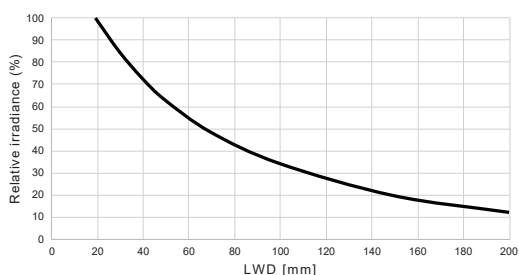
**LB-300X150SW**  
Standard Type

Emitting Width 150 mm



**LB-H-300X50SW**  
High Power Type

Emitting Width 50 mm



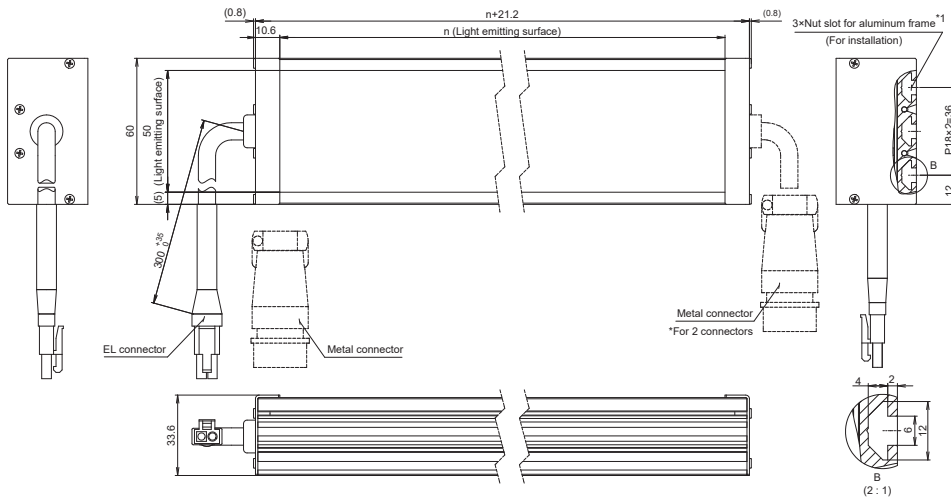
Graphs shown are for reference only. Not a guarantee of product quality.

# → Dimensions (mm)

## ■ Emitting Width 50 mm **Standard Type** (for all wavelengths) / **High Power Type**

LB-H-nX50SW (n=200 to 2700)

LB-nX50□□ (n=200 to 2700, □□=RD, SW, BL, IR86)



LB-H-nX50SW

n Dimensions	Connector Type
200 to 1,000	EL connector
1,100 to 2,100	Metal connector
2,200 to 2,700	Metal connector×2*

LB-nX50RD/SW/BL

n Dimensions	Connector Type
2,00 to 1,600	EL connector
1,700 to 2,700	Metal connector

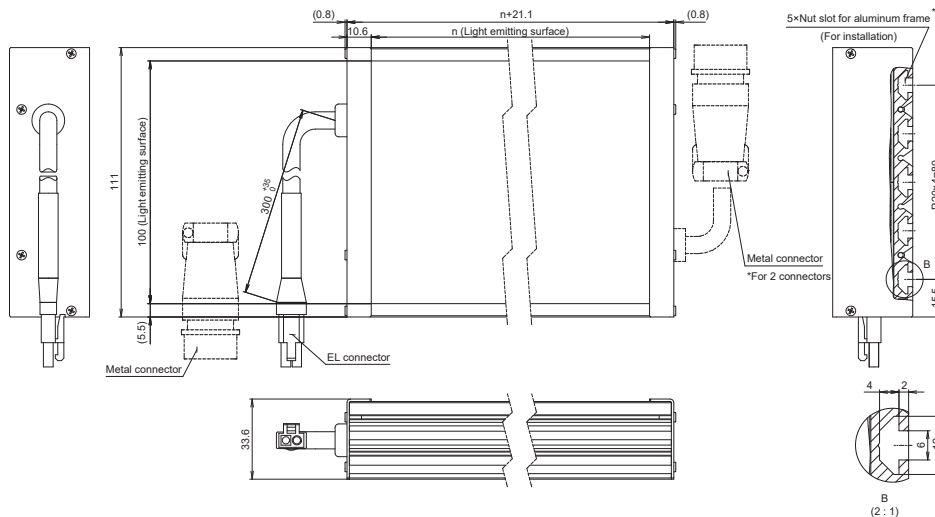
LB-nX50IR86

n Dimensions	Connector Type
200 to 2,700	EL connector

\*1 Nuts can be installed by using post-installation nuts or by removing the side panels.

## ■ Emitting Width 100 mm **Standard Type** (for all wavelengths)

LB-nX100□□ (n=200 to 2700, □□=RD, SW, BL, IR86)



LB-nX100RD/SW/BL

n Dimensions	Connector Type
200 to 800	EL connector
900 to 1,600	Metal connector
1,700 to 2,700	Metal connector×2*

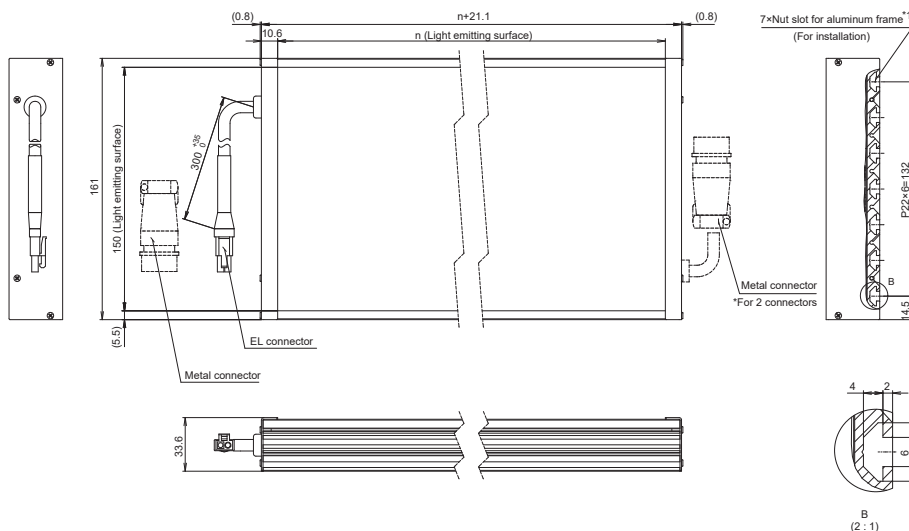
LB-nX100IR86

n Dimensions	Connector Type
200 to 1,500	EL connector
1,600 to 2,700	Metal connector

\*1 Nuts can be installed by using post-installation nuts or by removing the side panels.

## ■ Emitting Width 150 mm **Standard Type** (for all wavelengths)

LB-nX150□□ (n=200 to 2700, □□=RD, SW, BL, IR86)



LB-nX150RD/SW/BL

n Dimensions	Connector Type
200 to 500	EL connector
600 to 1,100	Metal connector
1,200 to 2,700	Metal connector×2*

LB-nX150IR86

n Dimensions	Connector Type
200 to 1,000	EL connector
1,100 to 2,000	Metal connector
2,100 to 2,700	Metal connector×2*

\*1 Nuts can be installed by using post-installation nuts or by removing the side panels.

## Diffusion Plates

Light characteristics can be changed by changing the diffusion plate. The DF-LB Series diffusion plates have lower uniformity and higher transmissivity than the standard type diffusion plates installed at the time of shipment.

\*For high power type lighting, DF-LB Series diffusion plates are installed at the time of shipment.

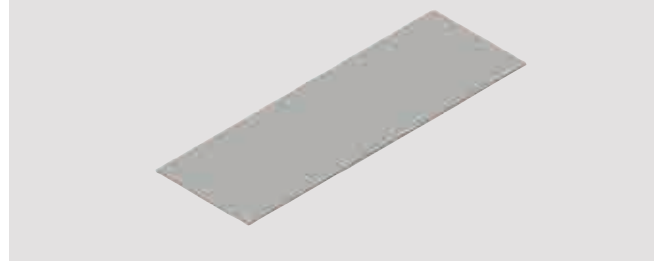


\*The "n" in the model name is the size (n=200 to 2700)

Model Name	Applicable Light Unit (for all wavelengths)
DF-LB-nX50	LB-nX50 Series
DF-LB-nX100	LB-nX100 Series
DF-LB-nX150	LB-nX150 Series

## Polarizing Plates

These are used together with a polarizing filter attached to the camera lens to eliminate surface glare.



\*The "n" in the model name is the size (n=200 to 2700)

Model Name	Applicable Light Unit (for all wavelengths)
PL-LB-nX50-HO*1	LB-H-nX50 Series LB-nX50 Series
PL-LB-nX50-VE*1	
PL-LB-nX100-HO*1	LB-nX100 Series
PL-LB-nX100-VE*1	
PL-LB-nX150-HO*1	LB-nX150 Series
PL-LB-nX150-VE*1	

\*1 HO: Light is polarized parallel to the longer edge of the plate.  
VE: Light is polarized parallel to the shorter edge of the plate.

## Protective Plates

Protects the emitting part of the light unit.

It is not intended to protect against dust or water.

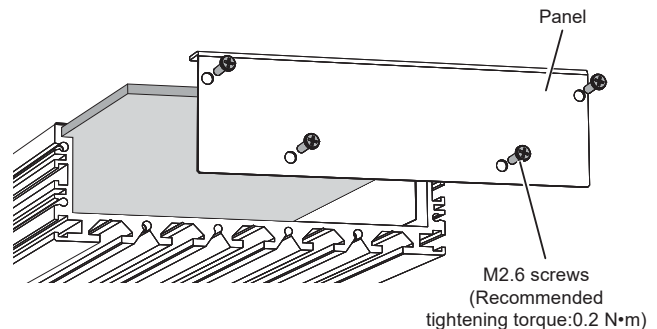
\*The "n" in the model name is the size (n=200 to 2700)

Model Name	Applicable Light Unit (Common for all colors)
PR-LB-nX50	LB-H-nX50 Series LB-nX50 Series
PR-LB-nX100	LB-nX100 Series
PR-LB-nX150	LB-nX150 Series

## → Installation Method

### Diffusion Plates Polarizing Plates Protective Plates

Loosen the M2.6 screws and remove the panel, and then replace the diffusion plate, polarizing plate, or protective plate.



- For light units that have one light cable, remove the panel on the side without the light cable.
- For light units that have two light cables, remove either one of the panels and replace the plate, being careful not to apply excessive force to the wires connected to the internal board.

■ "CCS" and "LIGHTING SOLUTION" are registered trademarks or trademarks of CCS Inc.

### Notes

- 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.

**CCS Inc.**  
CREATING CUSTOMER SATISFACTION

**Headquarters** (Kyoto, Japan)  
TEL: +81-75-415-8284, FAX: +81-75-415-8316  
E-mail: sales@ccs-inc.co.jp  
https://www.ccs-grp.com/

**CCS Asia PTE. LTD.** (Singapore)  
TEL: +65-6363-1180, FAX: +65-6363-1236  
E-mail: sales@ccs-asia.com.sg  
http://www.ccs-asia.com.sg/

**CCS China Inc.** (Shenzhen)  
TEL: +86-755-8279-0477, FAX: +86-755-8279-0478  
E-mail: ccschina@ccs-inc.co.jp  
https://www.ccs-inc.cn/

**CCS America, Inc.** (USA)  
TEL: +1-781-272-6900, FAX: +1-781-272-6902  
E-mail: info@ccsamerica.com  
https://www.ccsamerica.com/

**CCS MV (Thailand) Co., Ltd.**  
TEL: +66-(0)2-779-1051, FAX: +66-(0)2-779-1054  
E-mail: sales@ccs-asia.com.sg  
http://www.ccs-asia.com.sg/

**Taiwan Office**  
TEL: +886-2-2581-7676, FAX: +886-2-2581-7662  
E-mail: taiwan-tr@ccs-inc.co.jp

**CCS Europe N. V.** (Belgium)  
TEL: +32-(0)2-333-0080, FAX: +32-(0)2-333-0081  
E-mail: info@ccseu.com

**CCS MV (Malaysia) Sdn. Bhd.**  
TEL: +604-611-6656  
E-mail: sales-msia@ccs-asia.com.sg  
http://www.ccs-asia.com.sg/

**CCS KOREA Inc.**  
E-mail: ccskorea@ccs-inc.co.jp