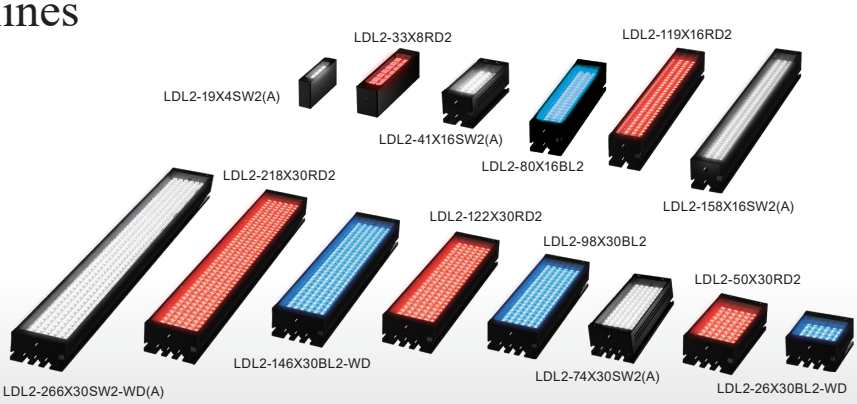
Provides direct light from an emitting part equipped with LEDs in straight lines



Applications Various inspections for reading text, visual inspection for damage on long and thin workpieces, damage inspection for metal with hairline finishing, light source for a line sensor camera, various inspections to detect foreign material, etc.

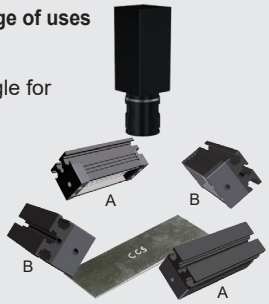
Rich Lineup with 144 Models

We have a lineup of 144 models, such as combinations of the size and emitting width of the emitting surface, directional characteristics, and the emitted color.

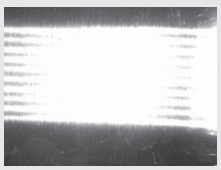
Compatible with a wide range of uses

You can freely adjust the illuminating direction and angle for use in a wide range of uses.

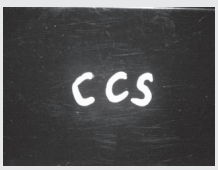
Bar lights allow the illumination direction and angle to be freely adjusted, enabling imaging according to the workpiece.



Illuminating image from direction A



Illuminating image from direction B



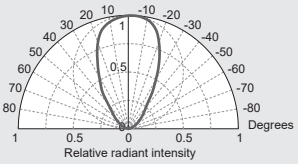
Bar Lights That Use Surface-Mounted LEDs

These are Bar Lights that use surface-mounted LEDs. We provide the narrow type, which performs convergent illumination for a narrow space, and the wide type (-WD) which illuminates a wide space.

Select the directional characteristics of a narrow type or wide type

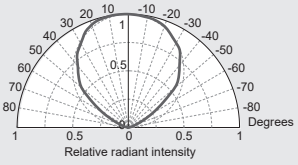
■ Directional characteristics of the Narrow Type (White)

Zoomed-in view of the emitting surface



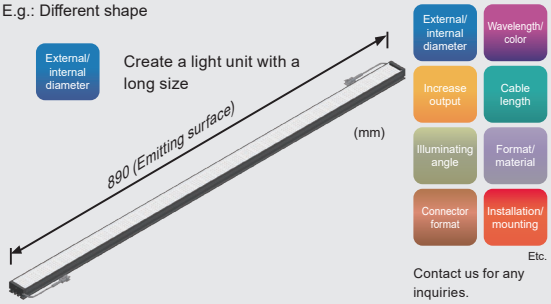
■ Directional characteristics of the Wide Type (White)

Zoomed-in view of the emitting surface



Custom Order Example

E.g.: Different shape

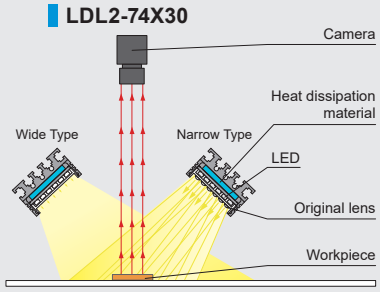


Contact us for any inquiries.

Example Configuration

Achieved light with a narrow directionality using the uniquely designed lens located in front of the LEDs. Illuminates direct light from any angle.

LDL2-74X30



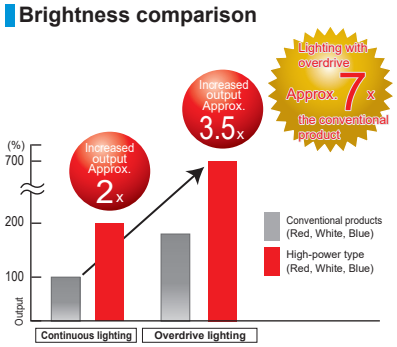
Various technical documents available. PDF Drawings | DXF Drawings | Product Brochures | Instruction Guides | 3D CAD | Data Sheets | Imaging Examples | Digital Catalogs — Register to use them.

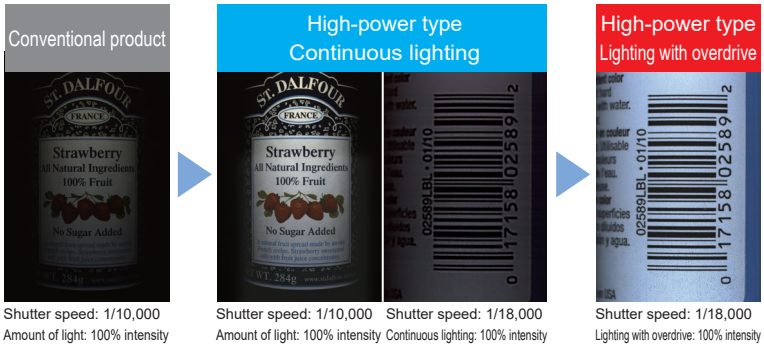
Increased Brightness and Rich Variety of Sizes

For detailed information on the overdrive, refer to P.396.

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

Brightness comparison





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

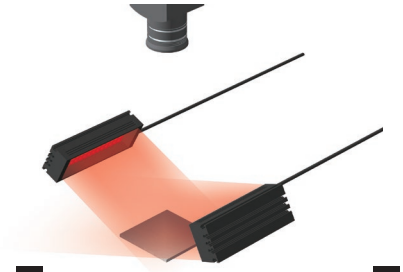
Shutter speed: 1/10,000
Amount of light: 100% intensity

Shutter speed: 1/18,000
Continuous lighting: 100% intensity

Shutter speed: 1/18,000
Lighting with overdrive: 100% intensity

*Comparison of LDL2-74X30SW and LDL2-74X30SW2. Comparison of LDL2-74X30SW2 on continuous lighting and overdrive lighting.

Imaging Example: Imaging of Damage in Sheet Metals (Hairline Finishing)

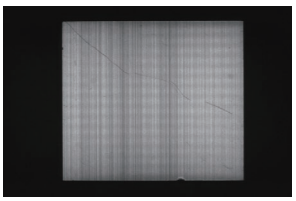


Description	Visual inspection
Workpiece	Aluminum sheets (hairline finishing)
Before the proposal	LED Bar Light
After the proposal	LDL2-74X30RD Precise illumination angle and direction
Result	Extracts only the damage

Workpiece image

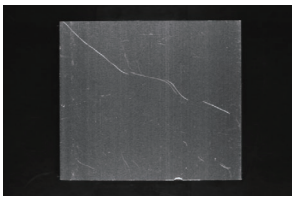
Aluminum sheets (hairline finishing)

LED Bar Light



Due to reflection from the hairline finishing surface, it is difficult to form an image of the damage.

LDL2-74X30RD



Surface reflection is reduced and a clear image of the damage can be made.

Imaging Example: Imaging Engraved Characters on Plastic Surfaces

Workpiece image

Digital video cassettes

LED Ring Light + Diffusion plate

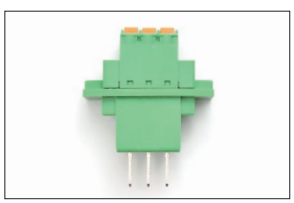
It is difficult to observe the engraved characters due to uneven illumination.

LDL2-80X16RD2 + Diffusion plate

When you attach the diffusion plate to the Bar Light and illuminate the workpiece, the engraved characters are evenly and brightly captured.

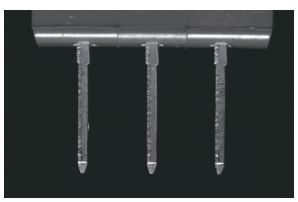
Imaging Example: Imaging the Appearance of Connector Pins

Workpiece image



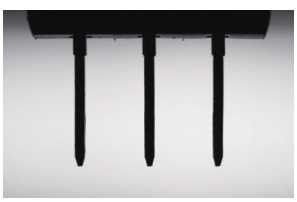
Connectors

LDL2-74X30SW2-WD



Illumination from the front of the workpiece allows you to observe the surface state of the connector.

LDL2-74X30SW2-WD + Diffusion plate



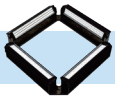
Illumination using a diffusion plate from behind the workpiece allows you to observe the appearance of the connector.

LDL2 Series

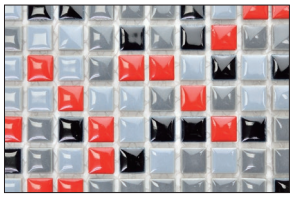
Refer to our website for product details.

CCS LDL2 ▶ Search

Imaging Example: Imaging the Surface and Appearance of Tiles

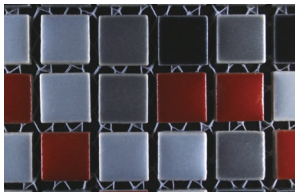


Workpiece image



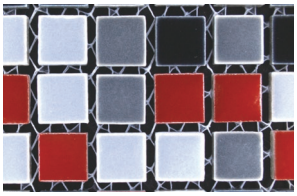
Tiles

LDL2-119X16SW2 (double use)



It is difficult to observe the surface and appearance of the tiles with a double use of the Bar Lights due to uneven illumination.

LDL2-119X16SW2 (quadruple use) + bracket



The Bar Lights which are mounted on the four sides of the bracket illuminate the surface and appearance of the tiles, so that they are captured brightly and evenly.

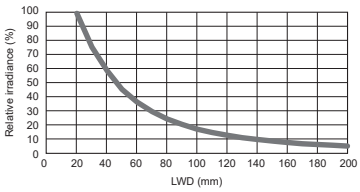
Data: Relative Irradiance Graph/Uniformity (Representative Example)

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

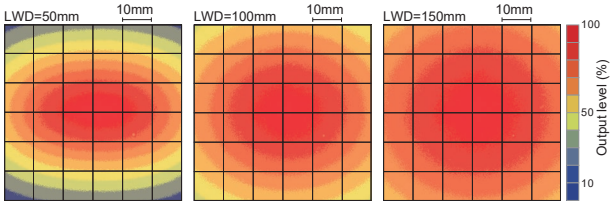
LDL2-74X30SW2(A) (Narrow type)

Relative irradiance graph*1 (LWD characteristics)*2

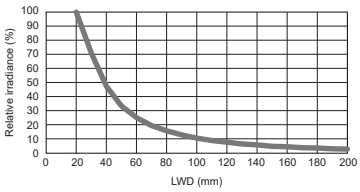
*1 Irradiance on the optical axis
*2 Illuminating distance from the light unit to the workpiece

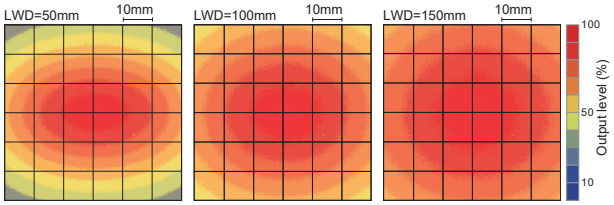


Uniformity (Relative irradiance)



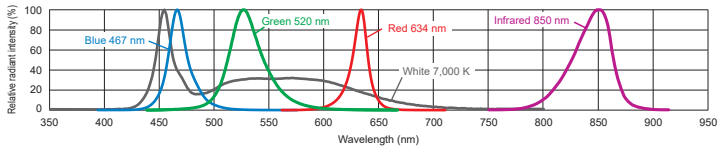
LDL2-74X30SW2-WD(A) (Wide type)





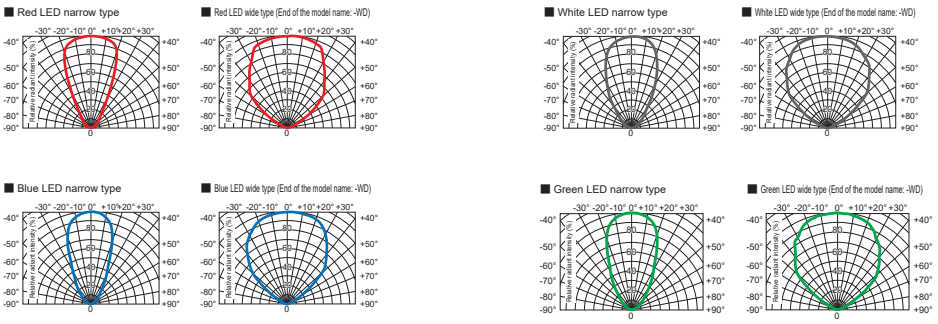
LED Properties

Spectral distribution



Lens filters suitable for each wavelength are available. For details about the lens filter, refer to P.349.

Directional characteristics



Be sure to read the User Manual included with the product before use and observe cautionary information. The data included is for reference only. Actual values may vary.

Various technical documents available. PDF Drawings | DXF Drawings | Product Brochures | Instruction Guides | 3D CAD | Data Sheets | Imaging Examples | Digital Catalogs

Register to use them.

Lineup "-WD" at the end of the model name: Wide type

Emitting width	Model Name *1	Input Voltage	Power Consumption RD2 (Red)	SW2*2 (White)	BL2 (Blue)	GR2 (Green)	IR850 (Infrared)	Option	Extension Cables	Recommended Control Units	Weight
4 mm	LDL2-19X4□□*4	24 V	1.3 W	1.3 W	1.1 W	0.8 W	—	Diffusion Plate, Polarizing Plate, Bracket*6 (*6 Available as custom order)			12 g
8 mm	LDL2-33X8□□*4	24 V	2.6 W	2.1 W	1.5 W	1.4 W	1.3 W	Diffusion Plate, Polarizing Plate, Bracket		PD4, PD3, CC-ST-1024, POD*5	20 g
16 mm	LDL2-41X16□□(-WD)	24 V	3.8 W	3.8 W	3.8 W	3.0 W	—				50 g
	LDL2-80X16□□(-WD)	24 V	7.6 W	7.6 W	7.6 W	6.0 W	—				75 g
	LDL2-119X16□□(-WD)	24 V	12 W	12 W	12 W	9.0 W *8	—				95 g
	LDL2-158X16□□(-WD)	24 V	16 W	16 W	16 W	12 W	—		FCB*6 Straight Cable		120 g
	LDL2-197X16□□(-WD)	24 V	19 W	19 W	19 W	15 W	—		FCB-W*7 2-Branch Cable		145 g
	LDL2-236X16□□(-WD)	24 V	23 W	23 W	23 W	18 W	—				170 g
	LDL2-275X16□□(-WD)	24 V	27 W	27 W	27 W	21 W	—			PD4, PD3, POD*5	195 g
	LDL2-314X16□□(-WD)	24 V	31 W	31 W	31 W	24 W	—		FCB-F 4-Branch Cable		220 g
	LDL2-353X16□□(-WD)	24 V	35 W	35 W	35 W	27 W	—			*8 CC-ST-1024 can be used for LDL2-119X16GR2(-WD), whose power consumption is less than 10 W.	245 g
	LDL2-392X16□□(-WD)	24 V	38 W	38 W	38 W	30 W	—		FRCB Robot Cable		270 g
	LDL2-431X16□□(-WD)	24 V	42 W	42 W	42 W	33 W	—				295 g
	LDL2-470X16□□(-WD)	24 V	46 W	46 W	46 W	36 W	—		*6 The cables with a model name that ends with -ME7/-EL2/ -PF/-PF-EL9 are not included. *7 The cables with a model name that ends with -EL2 are not included.		320 g
	LDL2-509X16□□(-WD)	24 V	50 W	50 W	50 W	39 W	—				345 g
30 mm	LDL2-26X30□□(-WD)	24 V	3.8 W	3.8 W	3.8 W	3.0 W	—			PD4, PD3, CC-ST-1024, POD*5	55 g
	LDL2-50X30□□(-WD)	24 V	7.6 W	7.6 W	7.6 W	6.0 W	—				80 g
	LDL2-74X30□□(-WD)	24 V	12 W	12 W	12 W	9.0 W *9	—				100 g
	LDL2-98X30□□(-WD)	24 V	16 W	16 W	16 W	12 W	—	Diffusion Plate, Polarizing Plate, Protective Plate, Bracket			125 g
	LDL2-122X30□□(-WD)	24 V	19 W	19 W	19 W	15 W	—				150 g
	LDL2-146X30□□(-WD)	24 V	23 W	23 W	23 W	18 W	—				170 g
	LDL2-170X30□□(-WD)	24 V	27 W	27 W	27 W	21 W	—				200 g
	LDL2-194X30□□(-WD)	24 V	31 W	31 W	31 W	24 W	—				225 g
	LDL2-218X30□□(-WD)	24 V	35 W	35 W	35 W	27 W	—				240 g
	LDL2-242X30□□(-WD)	24 V	38 W	38 W	38 W	30 W	—				275 g
	LDL2-266X30□□(-WD)	24 V	42 W	42 W	42 W	33 W	—			PD4, PD3, POD*5	280 g
	LDL2-290X30□□(-WD)	24 V	46 W	46 W	46 W	36 W	—				325 g
	LDL2-314X30□□(-WD)	24 V	50 W	50 W	50 W	39 W	—			*9 CC-ST-1024 can be used for LDL2-74X30GR2(-WD), which power consumption is less than 10 W.	350 g
	LDL2-338X30□□(-WD)	24 V	53 W	53 W	53 W	42 W	—				375 g
	LDL2-362X30□□(-WD)	24 V	57 W	57 W	57 W	45 W	—				400 g
	LDL2-386X30□□(-WD)*3	24 V	61 W	61 W	61 W	48 W	—		FCB-EL2 Straight Cable		425 g
	LDL2-410X30□□(-WD)*3	24 V	65 W	65 W	65 W	51 W	—				450 g
	LDL2-434X30□□(-WD)*3	24 V	69 W	69 W	69 W	54 W	—		FCB-W-EL2 2-Branch Cable		475 g
	LDL2-458X30□□(-WD)*3	24 V	72 W	72 W	72 W	57 W	—				500 g
	LDL2-482X30□□(-WD)*3	24 V	76 W	76 W	76 W	60 W	—		FCB-EL2 Straight Cable		525 g
	LDL2-506X30□□(-WD)*3	24 V	80 W	80 W	80 W	63 W	—				550 g

Extension Cables ▶ P.361 | Control Unit Selection Guide ▶ P.285 | List of Control Unit Specifications ▶ P.287

* For the peak wavelength / correlated color temperature, refer to the spectral distribution on P.51 "LED Properties".

*1 □□ in the model name contains the LED color. (RD2: Red, SW2: White, BL2: Blue, GR2: Green, IR860: Infrared)

*2 SW: (A) is added to the end of the model name only for white color.
Example: LDL2-41X16SW2(A), LDL2-41X16SW2-WD(A)

*3 The connector is an EL connector (ELP-02V ①: +brown ②: -blue).
Please use a power supply with EL connectors when using this product.

*4 All LEDs of the LDL2-19X4 and LDL2-33X8 have wide type directional characteristics.

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

Change in model names

"(A)" is added to the end of SW2 model names only
e.g. LDL2-41X16SW2 → LDL2-41X16SW2(A)
LDL2-41X16SW2-WD → LDL2-41X16SW2-WD(A)

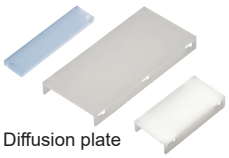
Reason	Impact on functions and performance
LEDs have been changed due to the discontinuation of the LEDs used.	Lower correlated color temperature (more yellow) Conventional product: 7800 K New product: 7000 K

LDL2 Series

Refer to our website for product details.

CCS LDL2 ▶ Search

Option

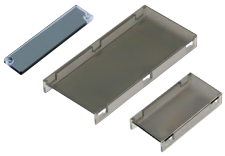


Diffusion plate

Can prevent glare, which is a problem when making images of glossy workpieces.

Model name	Applicable Light Unit (Common for all colors)
DF-LDL2-19X4	LDL2-19X4
DF-LDL2-33X8	LDL2-33X8
DF-LDL2-41X16	LDL2-41X16(-WD)
DF-LDL2-80X16	LDL2-80X16(-WD)
DF-LDL2-119X16	LDL2-119X16(-WD)
DF-LDL2-158X16	LDL2-158X16(-WD)
DF-LDL2-26X30	LDL2-26X30(-WD)
DF-LDL2-50X30	LDL2-50X30(-WD)
DF-LDL2-74X30	LDL2-74X30(-WD)
DF-LDL2-98X30	LDL2-98X30(-WD)
DF-LDL2-122X30	LDL2-122X30(-WD)
DF-LDL2-146X30	LDL2-146X30(-WD)
DF-LDL2-218X30	LDL2-218X30(-WD)
DF-LDL2-266X30	LDL2-266X30(-WD)

▶ P.353



Polarizing plate

Use with a polarizing filter to remove the light's surface reflection.

Model name	Applicable Light Unit (Common for all colors)
PL-LDL2-19X4-HO	LDL2-19X4
PL-LDL2-19X4-VE	
PL-LDL2-33X8-HO	LDL2-33X8
PL-LDL2-33X8-VE	
PL-LDL2-41X16	LDL2-41X16(-WD)
PL-LDL2-41X16-VE	
PL-LDL2-80X16	LDL2-80X16(-WD)
PL-LDL2-80X16-VE	
PL-LDL2-119X16	LDL2-119X16(-WD)
PL-LDL2-119X16-VE	
PL-LDL2-158X16	LDL2-158X16(-WD)
PL-LDL2-158X16-VE	

▶ P.355

There are two kinds of polarizing plates: the HO and the VE. For details, refer to P. 355.

Model name	Applicable Light Unit (Common for all colors)
PL-LDL2-26X30	LDL2-26X30(-WD)
PL-LDL2-26X30-VE	
PL-LDL2-50X30	LDL2-50X30(-WD)
PL-LDL2-50X30-VE	
PL-LDL2-74X30	LDL2-74X30(-WD)
PL-LDL2-74X30-VE	
PL-LDL2-98X30	LDL2-98X30(-WD)
PL-LDL2-98X30-VE	
PL-LDL2-122X30	LDL2-122X30(-WD)
PL-LDL2-122X30-VE	
PL-LDL2-146X30	LDL2-146X30(-WD)
PL-LDL2-146X30-VE	
PL-LDL2-218X30	LDL2-218X30(-WD)
PL-LDL2-218X30-VE	
PL-LDL2-266X30	LDL2-266X30(-WD)
PL-LDL2-266X30-VE	

Protective plate

Protects the emitting part of the light unit.

Not intended to protect against dust or water.

Model name	Applicable Light Unit (Common for all colors)
CV-LDL2-41X16	LDL2-41X16(-WD)
CV-LDL2-80X16	LDL2-80X16(-WD)
CV-LDL2-119X16	LDL2-119X16(-WD)
CV-LDL2-158X16	LDL2-158X16(-WD)
CV-LDL2-26X30	LDL2-26X30(-WD)
CV-LDL2-50X30	LDL2-50X30(-WD)
CV-LDL2-74X30	LDL2-74X30(-WD)
CV-LDL2-98X30	LDL2-98X30(-WD)
CV-LDL2-122X30	LDL2-122X30(-WD)
CV-LDL2-146X30	LDL2-146X30(-WD)
CV-LDL2-218X30	LDL2-218X30(-WD)
CV-LDL2-266X30	LDL2-266X30(-WD)

Not applicable for the LDL2-19X4 and LDL2-33X8 Series.

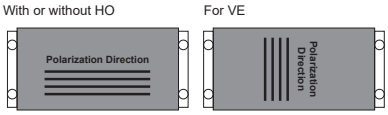
▶ P.358

When the model number ends with or without HO

As shown in the figure, the polarization direction is **horizontal** with respect to the long side of the polarizing plate.

When the model number ends with VE

As shown in the figure, the polarization direction is **perpendicular** with respect to the long side of the polarizing plate.



Refer to the Technical Guide Page for polarization. ▶ P.397

Bracket

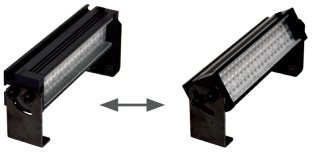
You can freely adjust the illuminating angle when affixing the Bar Light. Various kinds of illumination are possible depending on the affixing method, such as illumination from two or four directions.

Model name	Note
BK-LDL2	Angle adjustment bracket common for the LDL2 Series (x2)

Not applicable for the LDL2-19X4 and LDL2-33X8 Series.

▶ P.359

Usage example of the BK-LDL2



Adjustable illuminating angle between 0 to 90°

Bracket

You can freely adjust the illuminating angle when affixing the Bar Light. Various kinds of illumination are possible depending on the affixing method, such as illumination from two or four directions.

Model name	Note
BK-LDQ2-33X8	Bracket that can install four of the Bar Lights.

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We accept custom orders for the brackets that are applicable for the following products. Contact your CCS sales representative for details.

Applicable Light Unit	BK-LDQ2
LDL2-19X4	Bracket that can install four Bar Lights. (Custom orders)
LDL2-26X30	
LDL2-50X30	

Bracket

You can freely adjust the illuminating angle when affixing the Bar Light. Various kinds of illumination are possible depending on the affixing method, such as illumination from two or four directions.

Model name	Note
BK-LDQ2-41X16	Bracket that can install four of the Bar Lights.
BK-LDQ2-80X16	
BK-LDQ2-119X16	
BK-LDQ2-158X16	
BK-LDQ2-74X30	
BK-LDQ2-98X30	
BK-LDQ2-122X30	
BK-LDQ2-146X30	
BK-LDQ2-218X30	
BK-LDQ2-266X30	

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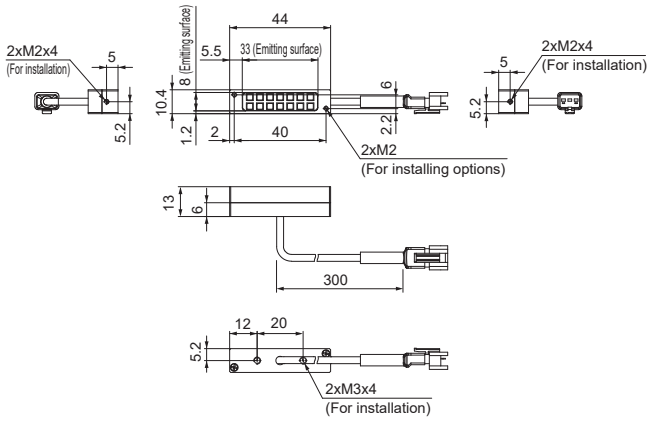
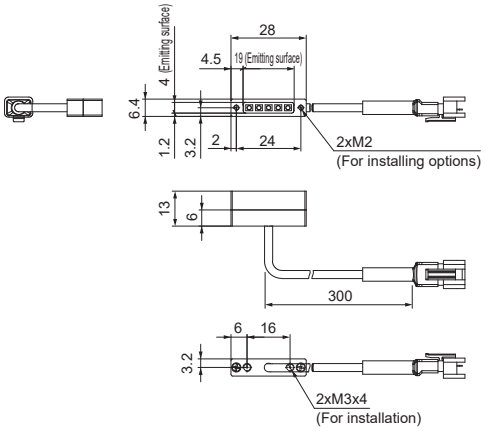
Dimensions (mm)

LDL2-33X8 (Common for all colors)

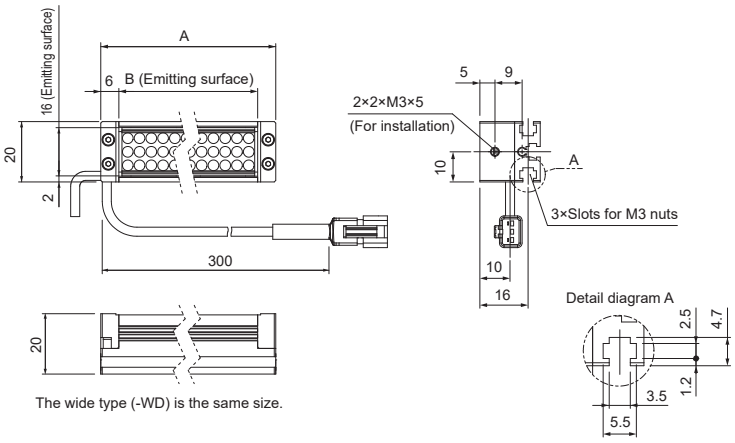


LDL2-19X4 (Common for all colors)



LDL2-nnnX16 (Common for all colors)

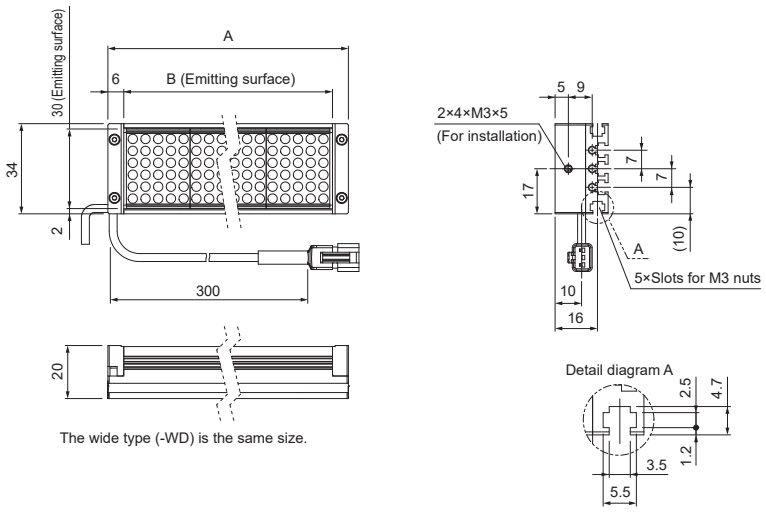
nnn= B (Emitting surface)



Applicable Light Unit	A	B
LDL2-41X16(-WD)	53	41
LDL2-80X16(-WD)	92	80
LDL2-119X16(-WD)	131	119
LDL2-158X16(-WD)	170	158
LDL2-197X16(-WD)	209	197
LDL2-236X16(-WD)	248	236
LDL2-275X16(-WD)	287	275
LDL2-314X16(-WD)	326	314
LDL2-353X16(-WD)	365	353
LDL2-392X16(-WD)	404	392
LDL2-431X16(-WD)	443	431
LDL2-470X16(-WD)	482	470
LDL2-509X16(-WD)	521	509

LDL2-nnnX30 (Common for all colors)

nnn= B (Emitting surface)



Applicable Light Unit	A	B
LDL2-26X30(-WD)	38	26
LDL2-50X30(-WD)	62	50
LDL2-74X30(-WD)	86	74
LDL2-98X30(-WD)	110	98
LDL2-122X30(-WD)	134	122
LDL2-146X30(-WD)	158	146
LDL2-218X30(-WD)	230	218
LDL2-266X30(-WD)	278	266
LDL2-170X30(-WD)	182	170
LDL2-194X30(-WD)	206	194
LDL2-242X30(-WD)	254	242
LDL2-290X30(-WD)	302	290
LDL2-314X30(-WD)	326	314
LDL2-338X30(-WD)	350	338
LDL2-362X30(-WD)	374	362
LDL2-386X30(-WD)*1	398	386
LDL2-410X30(-WD)*1	422	410
LDL2-434X30(-WD)*1	446	434
LDL2-458X30(-WD)*1	470	458
LDL2-482X30(-WD)*1	494	482
LDL2-506X30(-WD)*1	518	506

*1 EL connector (ELP-02V, 1: +Brown, 2: -Blue).
Use the control unit which has EL connectors.