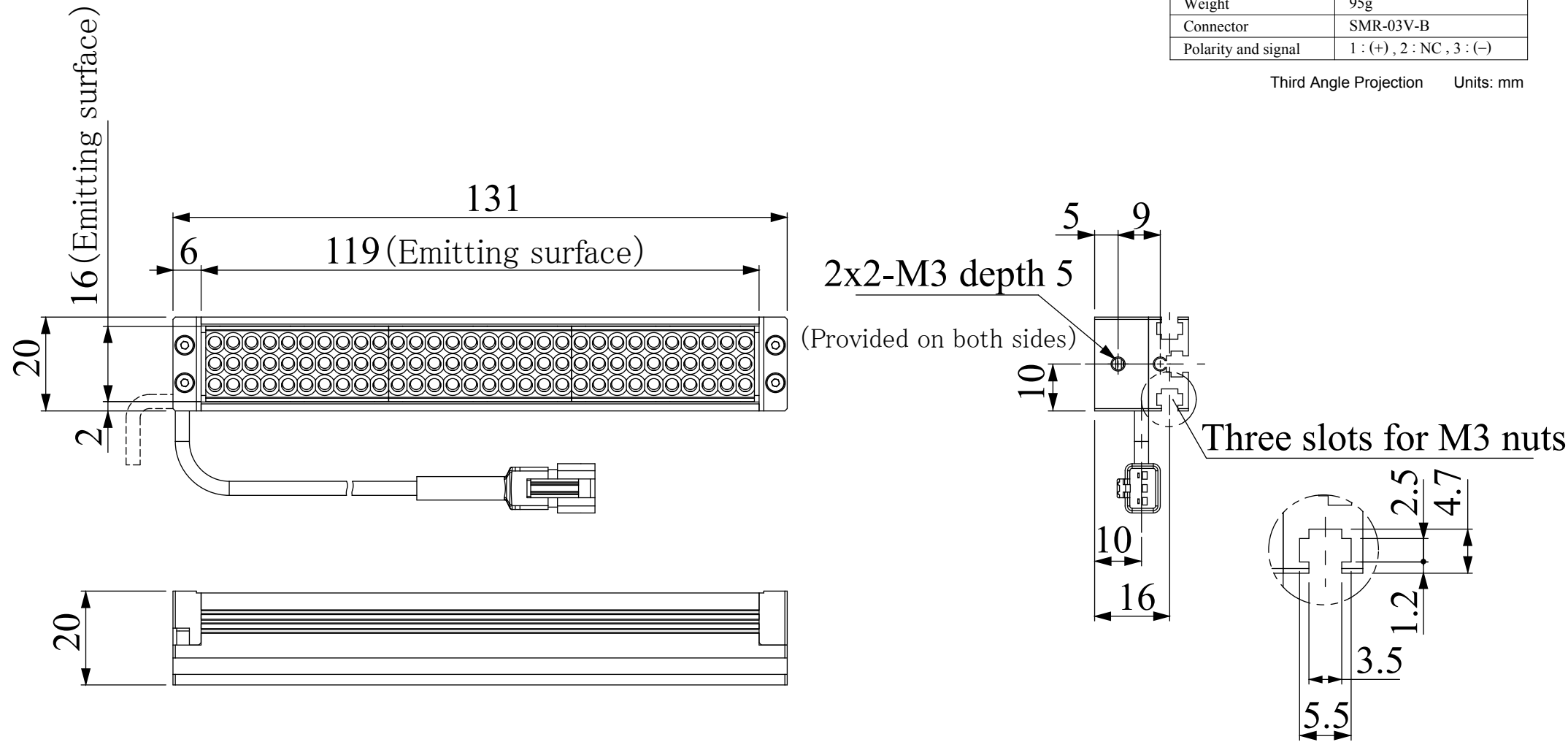
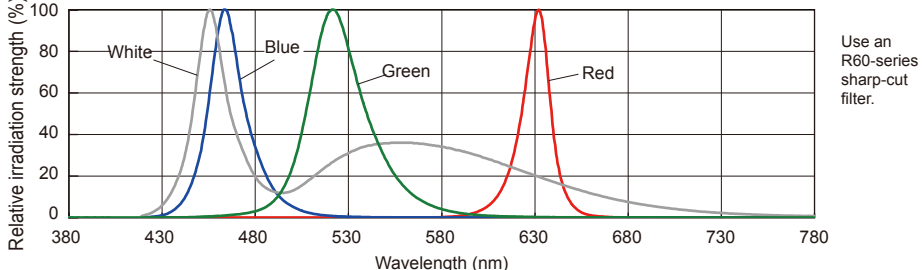


LDL2-119X16SW

Model name	LDL2-119X16SW
LED color	White
Input voltage	DC24V
Power consumption	5.7W
Weight	95g
Connector	SMR-03V-B
Polarity and signal	1 : (+) , 2 : NC , 3 : (-)

Third Angle Projection Units: mm



Common Specifications				
LED color	Red (RD)	White (SW)	Blue (BL)	Green (GR)
Input voltage	24 V max.			
Peak wavelength (typ.)	635 nm	—	470 nm	525 nm
Relative color temperature (typ.)	—	6,600 K	—	—
Cable length	0.3 m			
Input connector	SMR-03V-B			
Polarity, signal	1: Anode (+) brown, 2: NC, 3: Cathode (–) blue			
Case material	Aluminum alloy			
Operating temperature and humidity	Temperature: 0 to 40°C, Humidity: 20% to 85% (with no condensation)			
Storage temperature and humidity	Temperature: -20 to 60°C, Humidity: 20% to 85% (with no condensation)			
Cooling method	Natural air cooling			
Spectral distribution	 Use an R60-series sharp-cut filter.			

Note: The values for irradiation strength and service life given in this catalog are for reference purposes. These values are not ensured.

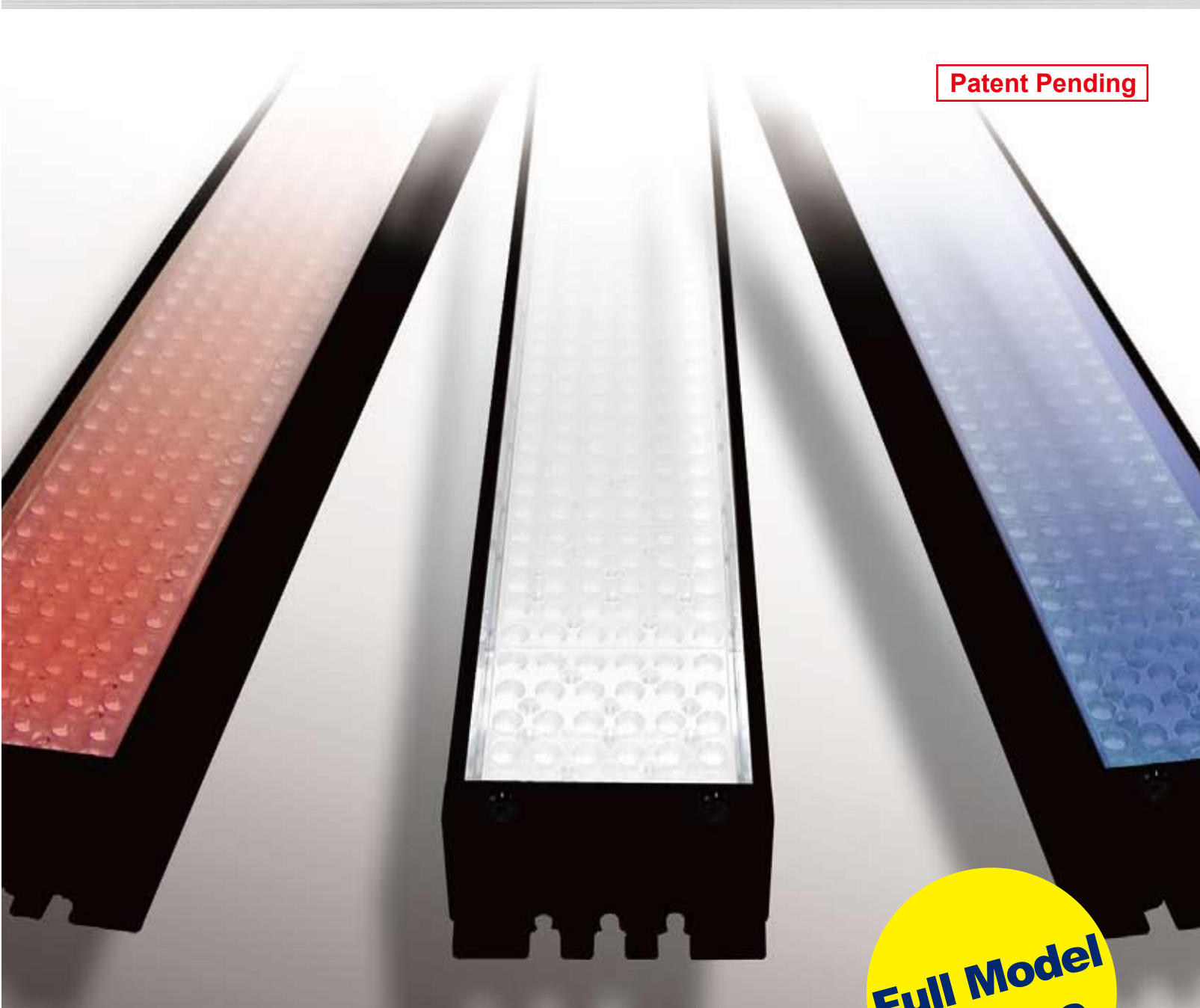
Precautions
●Carefully read the product's instruction manual before use to ensure correct operation. ●Product specifications and design are subject to change without notice. ●Examples of workpiece imaging in this catalog are a guide that may be informative for choosing Light Units. Please check the functions of the equipment and requirements before choosing a Light Unit.





LIGHTING SOLUTION

LED Illuminators for Machine Vision



Patent Pending

Full Model Change

New Generation LED Bar Light

New Bar Light Units with Direct Illumination

The New LDL2 Series

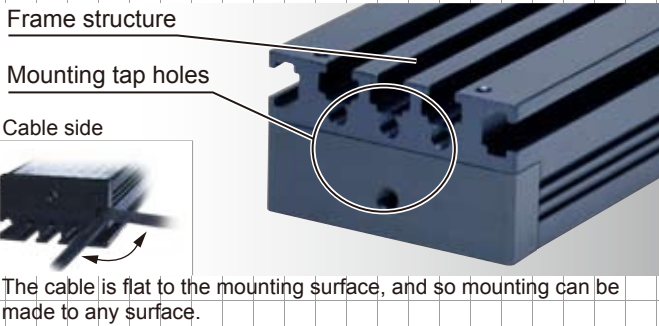
CCS Inc.

Full Model Change — Five New Points —

Point 1 — New Mounting Method

The new mounting method enables versatile mounting to match the installation environment.

+ Heat Dissipation Enhanced



You can select from two methods for greater mounting versatility to match your installation environments: the new frame structure mounting method or the conventional mounting holes.

With the new mounting method, you have freedom in adjusting the lighting position and mounting location by sliding the securing nuts into the internal grooves in the frame structure. The size of the internal grooves complies with JIS standard M3 nuts, which are commonly used. (Use JIS standard M3 nuts for mounting.)

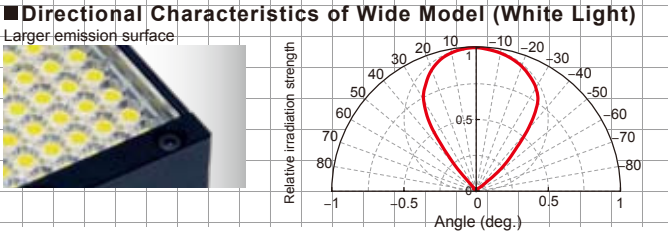
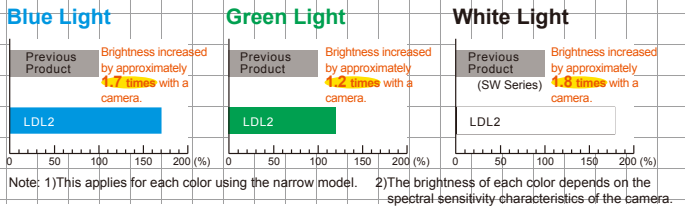
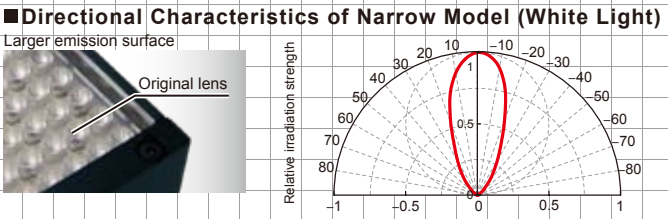
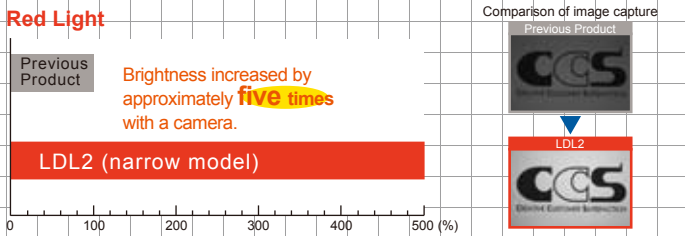
Point 2 — High Output

Enhanced Output with Improved Light Emission Efficiency

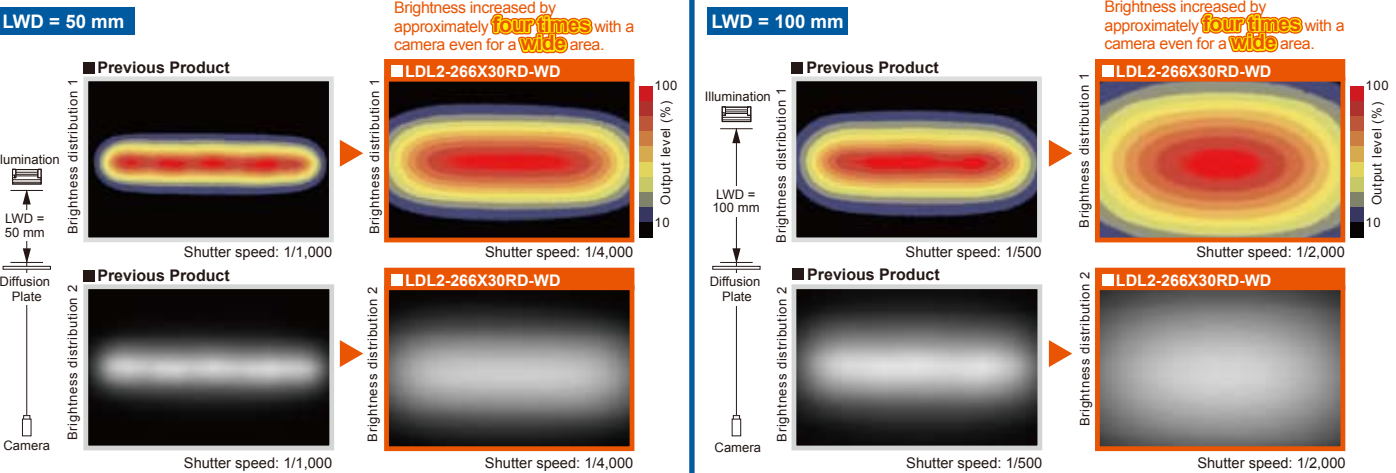
+ Selectable Directional Characteristics

A brightness of approximately five times is achieved over previous products for red light with a camera. Brightness has also been enhanced for white, blue, and green light.

Two models are available with different directional characteristics: the narrow model, which uses the original lens with directional characteristics similar to previous models, and a wide model, which has diffuse illumination in a wide range.



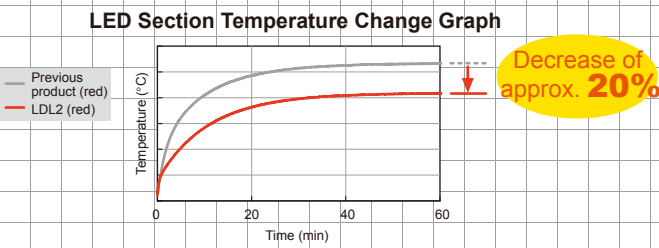
The wide model can provide uniform illumination in a wide area, which offers new usage of bar light. We recommend this new method using Bar Light Units.



Note: 1)Relative sensor brightness distribution measurement conditions: Intensity: 100%, Lens: F16-mm, Width: 775 mm, Field of vision: 303 x 227 mm 2)The brightness depends on the spectral sensitivity characteristics of the camera. 3)The values given here are for reference purposes. Actual values may vary.

Point 3 — Enhanced Heat Dissipation

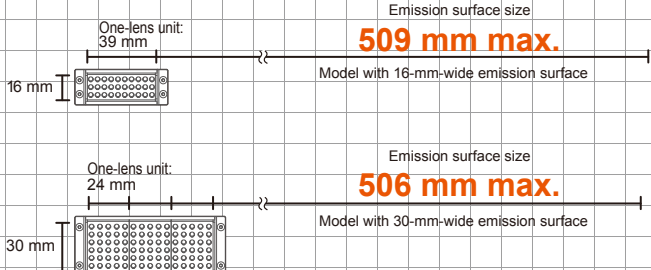
Stable long-term performance with high-efficiency heat dissipation



Using heat radiating fins and the frame structure increases the surface area by 40% over the previous model. This enables a decrease by approximately 20% of the LED mounting section temperature due to highly efficient heat radiation.

Point 4 — Enhanced Customizability

Maximum emission surface size of 500 mm.



Using one lens of a standardized size enables flexible customizability. The specified length of light unit can be produced in the unit of one lens.

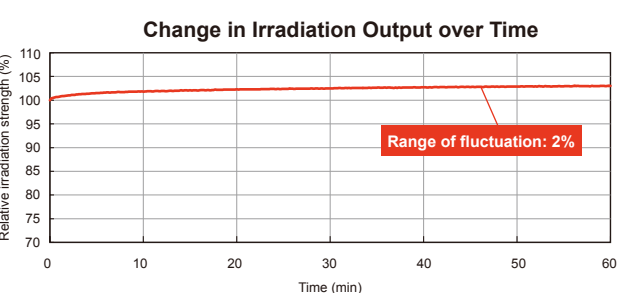
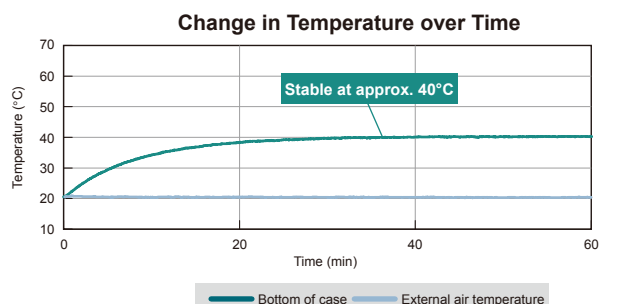
Note: For other lengths, contact your CCS sales representative.

Point 5 — 24-V Input For All Colors

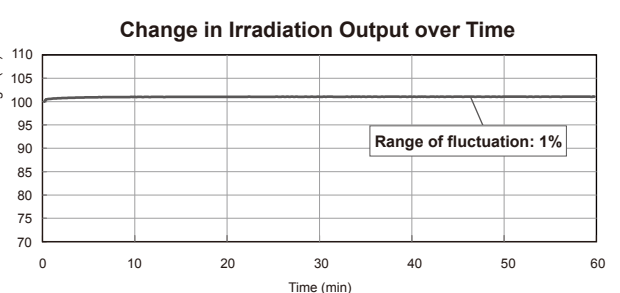
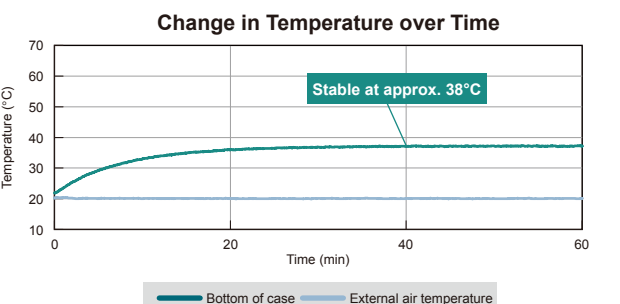
The power that is supplied is the same for all light colors. Previously, 12 V was used only for red light, but the voltage is now 24 V for all colors.

Data Typical Examples. There are virtually no changes in the graph values for the narrow model or changes that depend on whether optional products are mounted.

LDL2-41X16RD-WD (Red Light) Actual values were measured using the LDL2-41X16RD-WD. (These values are for reference only.)



LDL2-41X16SW-WD (White Light) Actual values were measured using the LDL2-41X16SW-WD. (These values are for reference only.)



Note: Graph measurement conditions: Actual measurement values: Intensity: 100%, External air temperature: 20°C (These values are for reference only.)

Options

The Diffusion Plate and Polarizing Plate have been redesigned to use insertion fixing rather than the previous screw fixing method. Upgraded materials for the Diffusion Plate improve the rate of diffusion. Protective Plate is available protect the emission area of the Light Unit as well as bracketss for securing the Light Unit to enable flexible adjustment of the emission direction.

Diffusion Plate

DF-LDL2 Series

Polarization Plate

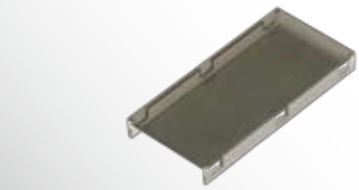
PL-LDL2 Series

Protective Plate

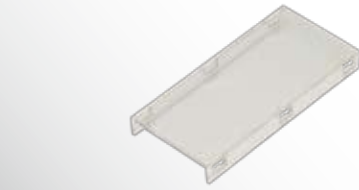
CV-LDL2 Series



The irradiated light is diffused to limit workpiece glare and reflections.



The light is polarized. You can prevent light reflection by fixing a PL-series polarization filter to the lens.



The plate protects the emission section of the Light Unit.

Note: The Protective Plate is not intended to provide protection against dust or water droplets.

Mounting

● Insert the tabs into the side grooves.

Removal

● Use a flat-blade screwdriver or other tool with a narrow point to catch the tabs and remove the Plate.

For details, refer to the instruction manual.

Light Fixing Brackets

BK-LDL2 (for all models in Series)



Accessories
Fixing screws (M3): 8 + 1 (spare)

When you secure the light, the angle of the irradiation can be adjusted as desired. A variety of methods are available for securing the Light Units, such as parallel emission from two directions or enveloped emission from four directions.

Mounting

● Install the bracketss on both ends of the Light Unit.

● Adjust the emission angle and then firmly secure the Light Unit.

For details, refer to the instruction manual.

Specifications of Special Options

Name	Diffusion Plate	Polarizing Plate	Protective Plate	Light Fixing Brackets
Model name (for both narrow model and wide model)	DF-LDL2-41X16	PL-LDL2-41X16(-VE)	CV-LDL2-41X16	BK-LDL2 (for all models in Series)
	DF-LDL2-80X16	PL-LDL2-80X16(-VE)	CV-LDL2-80X16	
	DF-LDL2-119X16	PL-LDL2-119X16(-VE)	CV-LDL2-119X16	
	DF-LDL2-74X30	PL-LDL2-74X30(-VE)	CV-LDL2-74X30	
	DF-LDL2-146X30	PL-LDL2-146X30(-VE)	CV-LDL2-146X30	
	DF-LDL2-218X30	PL-LDL2-218X30(-VE)	CV-LDL2-218X30	
	DF-LDL2-266X30	PL-LDL2-266X30(-VE)	CV-LDL2-266X30	
Heat resistance	80°C	60°C	80°C	—

Two types of Polarizing Plate are available. Use combinations for the following cases.

Mounting with Emission from Four Directions

Example

Use a combination of two pairs of the two types.

Differentiating Paired Polarizing Plates

Black

Paired Polarizing Plates will turn black when they overlap in opposite directions and will not be black when they overlap in the same direction.

Not black

The polarization direction differs by 90°.

Dimensional diagrams (mm)

DF/PL/CV-LDL2 Series

16-mm-wide models

30-mm-wide models

BK-LDL2

(Bilaterally Symmetric)

Product Lineup

The standard lineup now includes models with a length of 200 mm or more as well as models with an emission surface of 30 mm. The lineup includes combination of over 50 models with light colors in red, white, blue, and green, various sizes, and narrow models or wide models.

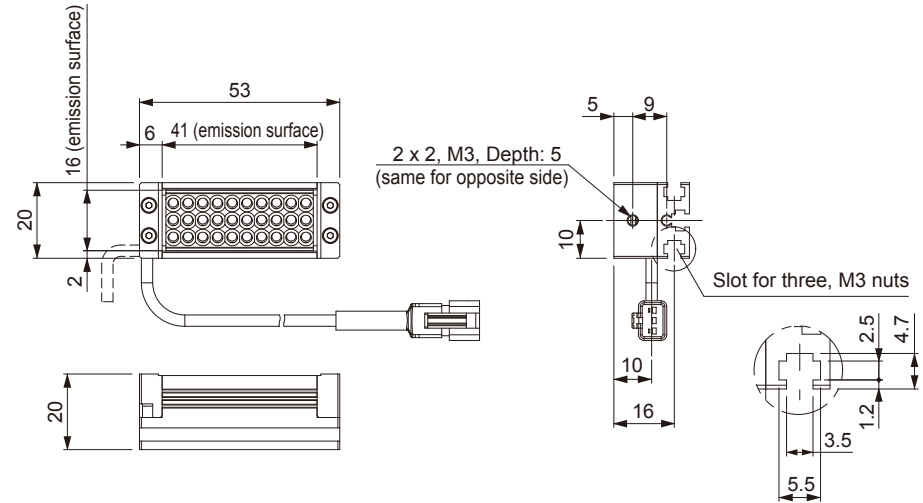
You can easily access information for the desired product by visiting the CCS website (Machine Vision Applications) and entering the seven-digit number into the direct number input space.

	Direct number	Model	LED color	Emission surface size	Input voltage	Power consumption	Weight	Supported options		
Model with 16-mm-wide emission surface	Narrow model	1003702	LDL2-41X16RD	Red	41x16 mm	24 V	1.9 W	50 g	Diffusion Plate	DF-LDL2-41X16
		1003705	LDL2-41X16SW	White					Polarizing Plate	PL-LDL2-41X16 (PL-LDL2-41X16-VE)
		1003704	LDL2-41X16BL	Blue					Protective Plate	CV-LDL2-41X16
		1003703	LDL2-41X16GR	Green					Light Fixing Brackets	BK-LDL2
	Wide model	1003706	LDL2-41X16RD-WD	Red	41x16 mm	24 V	1.9 W	50 g	Diffusion Plate	DF-LDL2-41X16
		1003709	LDL2-41X16SW-WD	White					Polarizing Plate	PL-LDL2-41X16 (PL-LDL2-41X16-VE)
		1003708	LDL2-41X16BL-WD	Blue					Protective Plate	CV-LDL2-41X16
		1003707	LDL2-41X16GR-WD	Green					Light Fixing Brackets	BK-LDL2
	Narrow model	1003710	LDL2-80X16RD	Red	80x16 mm	24 V	3.8 W	75 g	Diffusion Plate	DF-LDL2-80X16
		1003713	LDL2-80X16SW	White					Polarizing Plate	PL-LDL2-80X16 (PL-LDL2-80X16-VE)
		1003712	LDL2-80X16BL	Blue					Protective Plate	CV-LDL2-80X16
		1003711	LDL2-80X16GR	Green					Light Fixing Brackets	BK-LDL2
	Wide model	1003714	LDL2-80X16RD-WD	Red	80x16 mm	24 V	3.8 W	75 g	Diffusion Plate	DF-LDL2-80X16
		1003717	LDL2-80X16SW-WD	White					Polarizing Plate	PL-LDL2-80X16 (PL-LDL2-80X16-VE)
		1003716	LDL2-80X16BL-WD	Blue					Protective Plate	CV-LDL2-80X16
		1003715	LDL2-80X16GR-WD	Green					Light Fixing Brackets	BK-LDL2
	Narrow model	1003718	LDL2-119X16RD	Red	119x16 mm	24 V	5.7 W	95 g	Diffusion Plate	DF-LDL2-119X16
		1003721	LDL2-119X16SW	White					Polarizing Plate	PL-LDL2-119X16 (PL-LDL2-119X16-VE)
		1003720	LDL2-119X16BL	Blue					Protective Plate	CV-LDL2-119X16
		1003719	LDL2-119X16GR	Green					Light Fixing Brackets	BK-LDL2
	Wide model	1003722	LDL2-119X16RD-WD	Red	119x16 mm	24 V	5.7 W	95 g	Diffusion Plate	DF-LDL2-119X16
		1003725	LDL2-119X16SW-WD	White					Polarizing Plate	PL-LDL2-119X16 (PL-LDL2-119X16-VE)
		1003724	LDL2-119X16BL-WD	Blue					Protective Plate	CV-LDL2-119X16
		1003723	LDL2-119X16GR-WD	Green					Light Fixing Brackets	BK-LDL2
Narrow model	1003726	LDL2-74X30RD	Red	74x30 mm	24 V	5.7 W	100 g	Diffusion Plate	DF-LDL2-74X30	
	1003729	LDL2-74X30SW	White					Polarizing Plate	PL-LDL2-74X30 (PL-LDL2-74X30-VE)	
	1003728	LDL2-74X30BL	Blue					Protective Plate	CV-LDL2-74X30	
	1003727	LDL2-74X30GR	Green					Light Fixing Brackets	BK-LDL2	
Wide model	1003730	LDL2-74X30RD-WD	Red	74x30 mm	24 V	5.7 W	100 g	Diffusion Plate	DF-LDL2-74X30	
	1003733	LDL2-74X30SW-WD	White					Polarizing Plate	PL-LDL2-74X30 (PL-LDL2-74X30-VE)	
	1003732	LDL2-74X30BL-WD	Blue					Protective Plate	CV-LDL2-74X30	
	1003731	LDL2-74X30GR-WD	Green					Light Fixing Brackets	BK-LDL2	
Narrow model	1003734	LDL2-146X30RD	Red	146x30 mm	24 V	12 W	170 g	Diffusion Plate	DF-LDL2-146X30	
	1003737	LDL2-146X30SW	White					Polarizing Plate	PL-LDL2-146X30 (PL-LDL2-146X30-VE)	
	1003736	LDL2-146X30BL	Blue					Protective Plate	CV-LDL2-146X30	
	1003735	LDL2-146X30GR	Green					Light Fixing Brackets	BK-LDL2	
Wide model	1003738	LDL2-146X30RD-WD	Red	146x30 mm	24 V	12 W	170 g	Diffusion Plate	DF-LDL2-146X30	
	1003741	LDL2-146X30SW-WD	White					Polarizing Plate	PL-LDL2-146X30 (PL-LDL2-146X30-VE)	
	1003740	LDL2-146X30BL-WD	Blue					Protective Plate	CV-LDL2-146X30	
	1003739	LDL2-146X30GR-WD	Green					Light Fixing Brackets	BK-LDL2	
Narrow model	1003742	LDL2-218X30RD	Red	218x30 mm	24 V	18 W	240 g	Diffusion Plate	DF-LDL2-218X30	
	1003745	LDL2-218X30SW	White					Polarizing Plate	PL-LDL2-218X30 (PL-LDL2-218X30-VE)	
	1003744	LDL2-218X30BL	Blue					Protective Plate	CV-LDL2-218X30	
	1003743	LDL2-218X30GR	Green					Light Fixing Brackets	BK-LDL2	
Wide model	1003746	LDL2-218X30RD-WD	Red	218x30 mm	24 V	18 W	240 g	Diffusion Plate	DF-LDL2-218X30	
	1003749	LDL2-218X30SW-WD	White					Polarizing Plate	PL-LDL2-218X30 (PL-LDL2-218X30-VE)	
	1003748	LDL2-218X30BL-WD	Blue					Protective Plate	CV-LDL2-218X30	
	1003747	LDL2-218X30GR-WD	Green					Light Fixing Brackets	BK-LDL2	
Narrow model	1003750	LDL2-266X30RD	Red	266x30 mm	24 V	21 W	280 g	Diffusion Plate	DF-LDL2-266X30	
	1003753	LDL2-266X30SW	White					Polarizing Plate	PL-LDL2-266X30 (PL-LDL2-266X30-VE)	
	1003752	LDL2-266X30BL	Blue					Protective Plate	CV-LDL2-266X30	
	1003751	LDL2-266X30GR	Green					Light Fixing Brackets	BK-LDL2	
Wide model	1003754	LDL2-266X30RD-WD	Red	266x30 mm	24 V	21 W	280 g	Diffusion Plate	DF-LDL2-266X30	
	1003757	LDL2-266X30SW-WD	White					Polarizing Plate	PL-LDL2-266X30 (PL-LDL2-266X30-VE)	
	1003756	LDL2-266X30BL-WD	Blue					Protective Plate	CV-LDL2-266X30	
	1003755	LDL2-266X30GR-WD	Green					Light fixing Brackets	BK-LDL2	

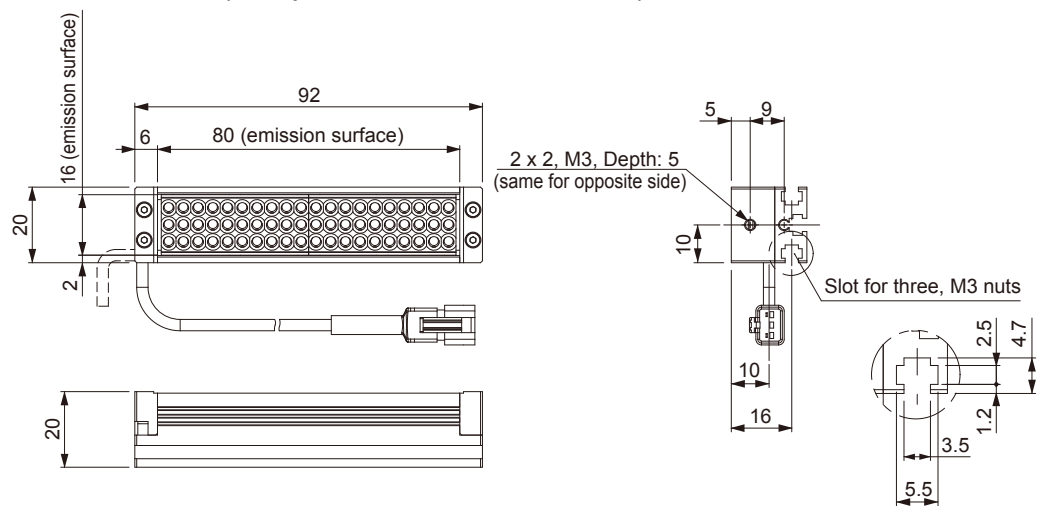
Dimensional diagrams (mm)

Model with 16-mm-wide emission surface

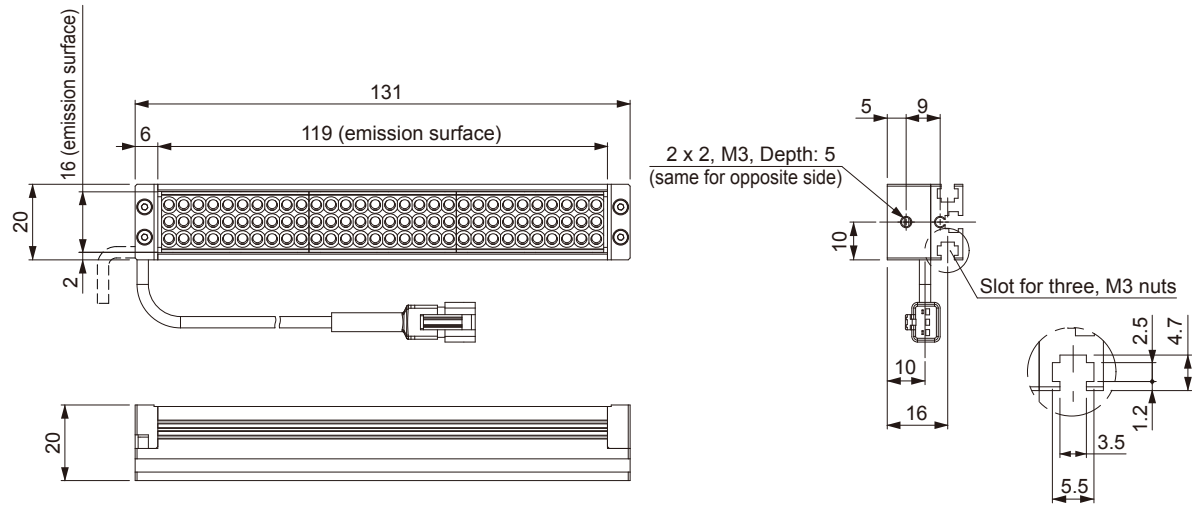
LDL2-41X16RD/SW/BL/GR (compatible with -WD models)



LDL2-80X16RD/SW/BL/GR (compatible with -WD models)

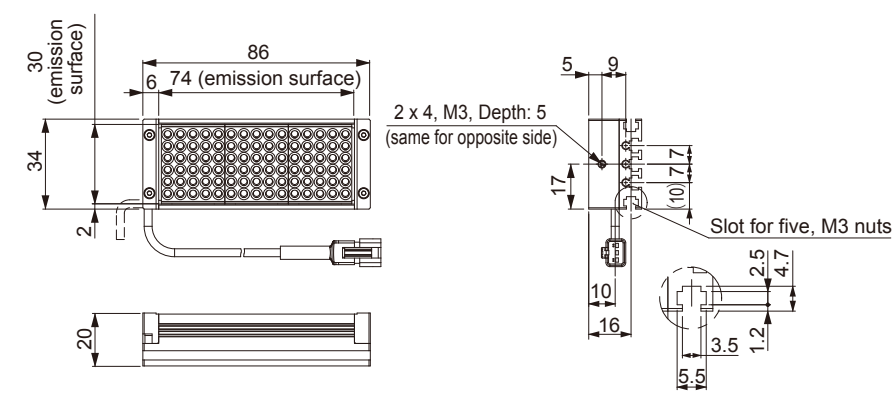


LDL2-119X16RD/SW/BL/GR (compatible with -WD models)

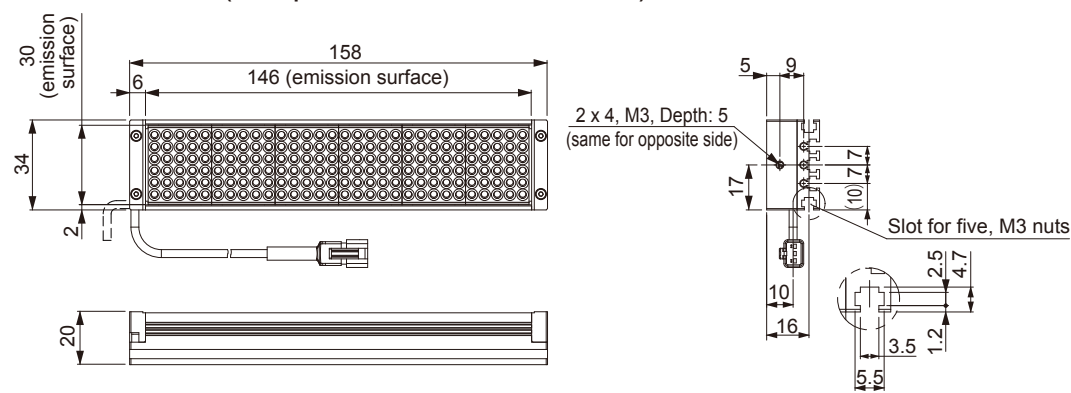


Model with 30-mm-wide emission surface

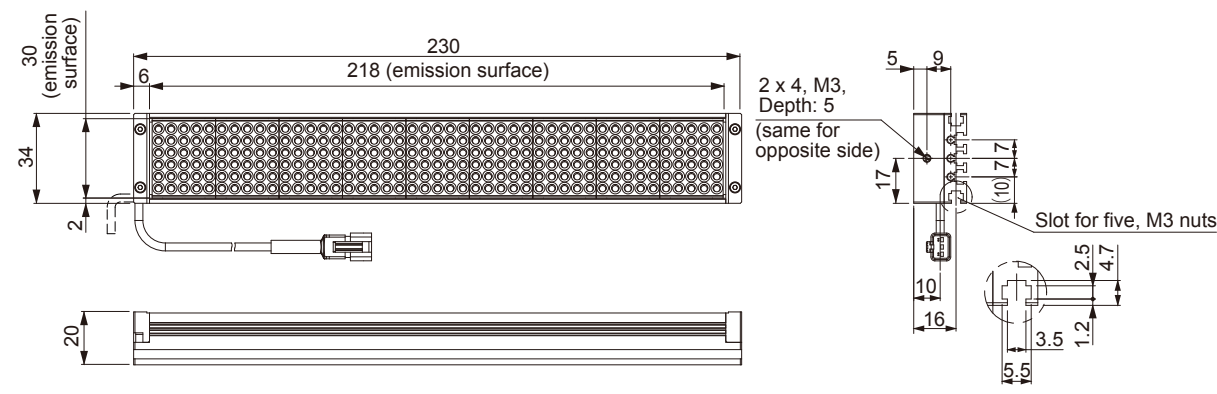
LDL2-74X30RD/SW/BL/GR (compatible with -WD models)



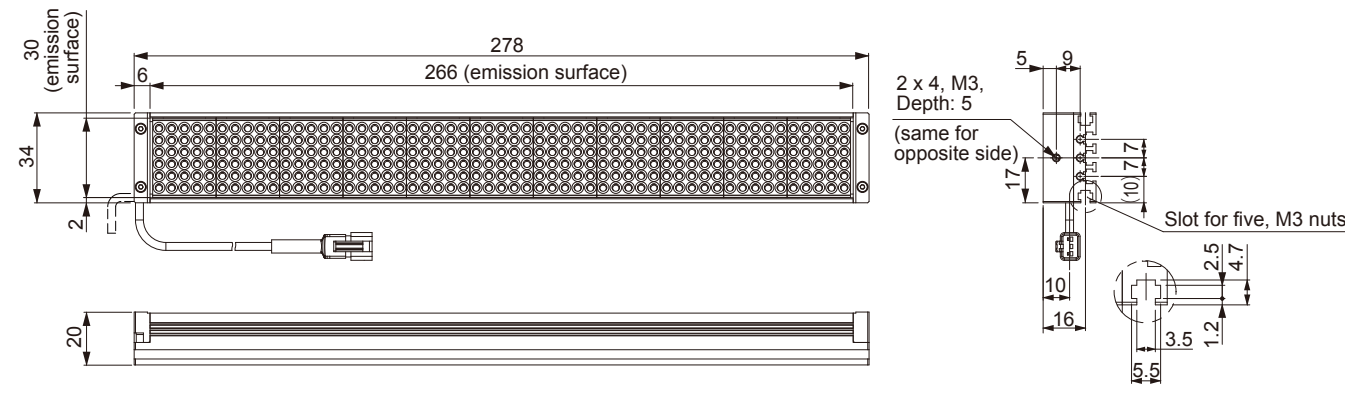
LDL2-146X30RD/SW/BL/GR (compatible with -WD models)



LDL2-218X30RD/SW/BL/GR (compatible with -WD models)



LDL2-266X30RD/SW/BL/GR (compatible with -WD models)



CE

product,
reference.

- 1 -

	BE CAREFUL OF THE LIGHT BEAM
	DO NOT TOUCH WITH SET HANDS
	DO NOT SUBJECT TO MOISTURE
	SHOCK HAZARD
	UNPLUG

	PROHIBITED
	PROHIBITED

- 2 -

- 3 -

- 4 -

- 5 -

- 6 -

- 7 -

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