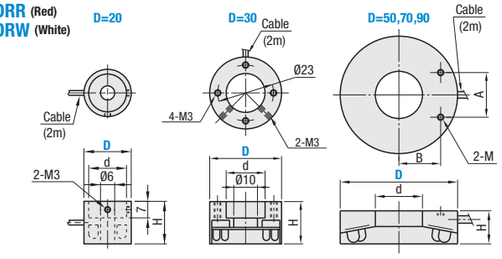
LED Lamps for Image Processing

Direct Ring Type / Backlight (Embedded light)

LED Lamps for Image Processing – Direct Ring Type

RoHS 10

LPDRR (Red)
LPDRW (White)



ⓘ End of the cable has a connector for the power controller.

Material: Aluminum (Body)
Surface Treatment: Black Anodize (Body)

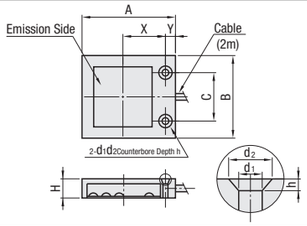
Part Number Type	D	*Illumination Angle (Degree)	Illumination Area	WD	d	H	A	B	M	Weight (g)	Viewing Distance (mm)	Illumination Range (mm)
LPDRR LPDRW	20	90	Ø10–30	30–70	16.1	18	—	—	—	70	~2	20~80
	30	90	Ø40–60	50–100	16.1	18	—	—	—	75	~4	20~100
	50	80	Ø60–80	50–100	20	14	20	18	3	60	~12	20~100
		25		10–20	20						~12	1~5
	70	80		50–100	34		30	25		80	~20	20~100
		*25		10–20	51					100	~30	1~10
	90	80		50–100	40	15	40	32	4	140	~25	20~150
		*25		10–20	62	16				120	~35	1~15

ⓘ For LPDRR, LPDRW, use LEDCNR0.5 (Click here) controller. (Third-party controllers cannot be used.)
*There are no LPDRR-70-25 or LPDRR-90-25 models.
* When selecting an illumination angle, refer to the "Features and Usage of LED Lighting" below.

LED Lamps for Image Processing – Backlight (Embedded light)

RoHS 10

LPBLR (Red)
LPBLW (White)



Material: Aluminum (Body)
Polyacetal (Emission side)
Surface Treatment: Black Anodize (Body)
Accessory: Flat Head Screw for Attachment 2 pcs.

Part Number Type	No.	Emission side	A	B	C	X	Y	H LPBLR	H LPBLW	d_1	d_2	h	Weight (g) LPBLR	Weight (g) LPBLW	Viewing Distance (mm)	Illumination Range (mm)
LPBLR LPBLW	25	25 x 25	40	35	20	18	4.5	8	25	3.4	6	2	55	100	~20	1~100
	50	50 x 50	70	60	40	33	7	10					100	200	~45	1~100
	75	75 x 75	95	85	50	46	6.5			4.5	8.5	3	150	320	~70	1~100

ⓘ Use with LEDCNR1 / LEDCNRF2 **P.2145** controllers (Other manufacturer's controllers cannot be used.)

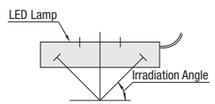
Part Number Example

Part Number	-	Exposure Angle
LPDRR50 LPBLW50	-	80

Features and Usage of LED Lighting

(1) Direct Ring Type

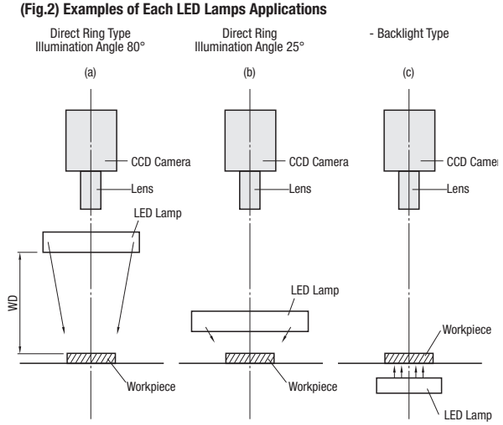
– By illuminating from 360° direction, even lighting without a shadow is obtained.
– As to the lighting of a wide illumination angle (80°), large amount of light can be obtained; therefore, it is suited when bright luminance is required. (a) However, the reflection of LED Lighting may occur in the case of the product that has gloss. In such cases, reflection can be reduced by using diffuser disc (board).
– As to the lighting of small illumination angle (25°), it is suitable to detect shallow irregularities and flaws without the reflection of LED Lighting even against gloss materials because of the low angled irradiation (b).



(2) Backlight Type

– LED Light faces and lightens directly up above, and the large amount of luminance can be obtained. Also, uniform illumination is achieved using a diffuser board.
– Do not occupy much space as it is designed to be compact (c).

(Fig.2) Examples of Each LED Lamps Applications



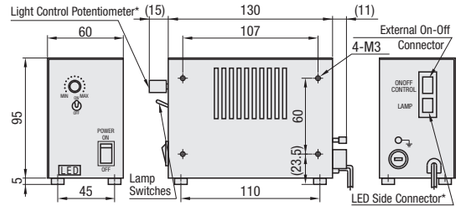
Power Controller for LED Lamps

Power Controller for LED Lamps

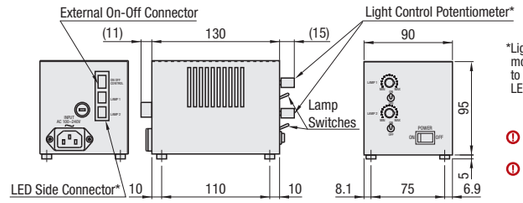
RoHS 10

LEDCNR

Japanese Specification (No. 0.5, 1)



Worldwide Specification (No. F1, F2)



*Light control differs according to the model of LED lamp. For details, refer to instruction manual for individual LED lamp.

ⓘ No.0.5 and 1 comes with a 2m electrical cable and an external input connector.
ⓘ No. F1 and F2 does not come with an electrical cable. Socket Standard: IEC60320/C14

Specifications

Input Power Supply	No. 0.5 / 1 AC100V±10% 50/60Hz No.F1 / F2 AC100V-240V 50/60Hz
Operating Temp.	0–45°C
Operating Humidity	75%RH or less (No condensation)
ON / OFF Control	External Input ON/OFF Signal
Lighting Method	Constant Voltage Power (Voltage variable)
Light Control	Continuously Variable (Knob on the Panel)

Part Number Type	No.	Specifications: Number of Circuits	Output Current	Capacity	Input Power Supply	Applicable Lighting (MISUMI Type)
LEDCNR	0.5	1	1.1A or Less	25W	AC100V ±10% 50/60 Hz	LPDR_20 / LPDR_50-25
	1					MMD / LPDR_30 / LPDR_50-80 / LPDR_70 / LPDR_90 / LPBL_
	F1	2	1.3A or less	30W	AC100V-240V 50/60 Hz	LPDR_20 / LPDR_50-25
	F2					MMD / LPDR_30 / LPDR_50-80 / LPDR_70 / LPDR_90 / LPBL_

Part Number Example

Part Number
LEDCNR1

Operation Method

(1) Confirm that the cable, connectors, etc. are all connected.
(2) Turn ON the power switch.
(3) The ON/OFF of the LED lighting is operated with LAMP ON/OFF switch.
(4) When LED light is ON, brightness is adjusted with the light control knob.
(5) The turn-off/on of the LED lighting device is facilitated by the external ON/OFF signal inputs.
Input Signal Area :
Voltage Applied (VDD) = DC12V (Min.) – DC24V (Max.)
Input Current (IF) = LED lighting is turned off when input 10 mA (Max.)
(6) Turn off the power switch.
*Be sure to turn off the power switch before removing or mounting the lamps. Never remove or mount lamps during operation, or it may result in malfunctioning of the lighting device.

Image Sample

Image Sample						
Work	Wire-Bonded Part on Circuit Board	Package of Tea Bag	IC (Laser Mark)	Lead Frame	Printing on Cardboard	Semiconductor Lead Bending
Lens	LFSHB-6-198	LCV6/LCVR1	LCV25/LCVR5	LCV50/LCVR5	LCV12/LCVR1x3	LTAB5/LTABA5
LED Lamp	LPDRR30-90	LPDRW90–80*	LPDRR90-25	LPBLR75	LPDRR90-80	LPDRR70-25
CCD Camera • WD	2/3 inch • 37	2/3 inch • 75	2/3 inch • 130	2/3 inch • 370	2/3 inch • 130	2/3 inch • 65

Image Sample						
Work	Fuse	Engravings on Cutter Edge	Chip Condenser	Tip Parts in the Tape (Presence Check)	Flat Washer (Scratch Detection)	Circuit Board Pattern
Lens	LFSL29-0.5-50.5	LFSHA-2-72.8	LFSHA-4-103.8	LFSL16-0.7-48	LFSL16-1-50	LFSHB-4-158
LED Lamp	LPBLR50	LPDRR30-90	LPDRR30-90	LPBLR50	LPDRR50-25	LPDRR30-90
CCD Camera • WD	2/3 inch • 95	2/3 inch • 75	2/3 inch • 75	2/3 inch • 95	2/3 inch • 68	2/3 inch • 45