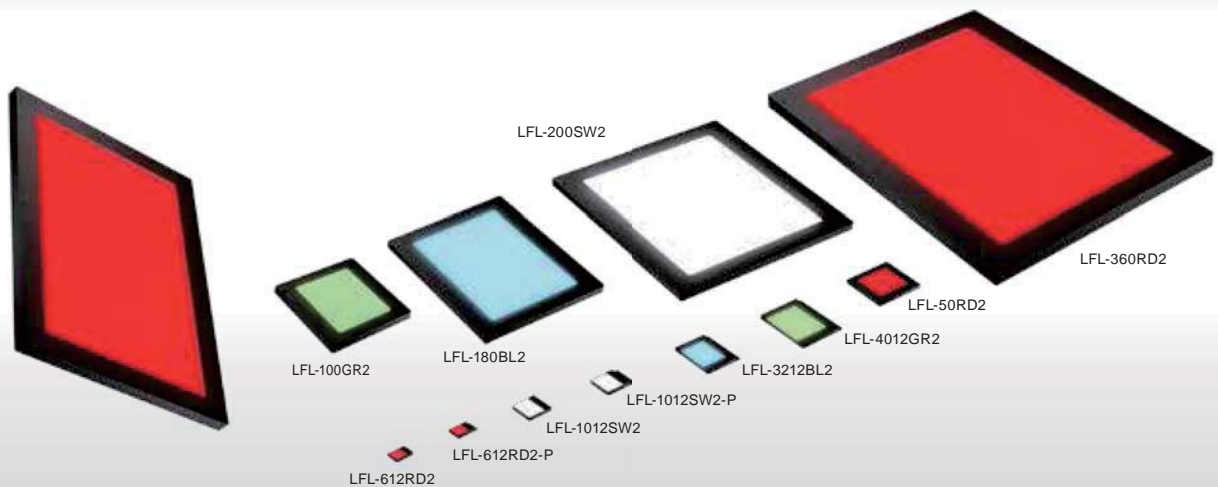


Diffused illumination from a flat emitting surface



Applications Dimension measuring, visual inspection, foreign material inspections, liquid level inspection, burr inspection of metal parts, inspection for tears or stains on packaging, etc.

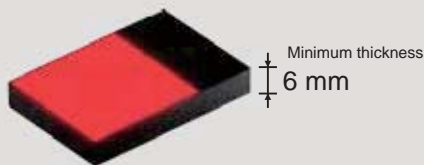
Rich Lineup with 43 Models

Rich lineup

The lineup consists of 35 models, with 9 sizes of emitting surfaces from 25 x 25 mm to 360 x 250 mm in each color. The rich lineup has a total of 43 models, including the LFL-612-P and LFL-1012-P, which add a plate for installation to the housing.

Energy-saving type that is light-weight and thin

The Light Unit's thin design, with a minimum thickness of 6 mm, allows for space-saving installation.

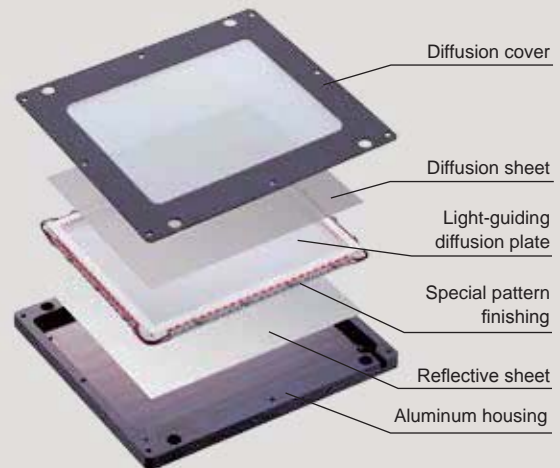


Model name	LFL-612RD2
Power consumption	24 V / 0.6 W
Weight	25 g

Uses a Unique Method of Light Guidance

LEDs are placed around the light-guiding diffusion plate. The special pattern finishing achieves illumination with even greater diffusion.

Cross-section image of the LFL-100



Custom Orders

Please contact your sales representative.

E.g.: Different shape

Format Allows you to create a Light Unit with a hole in it and pass things through the center

Can also be used as a camera window



Customizable items

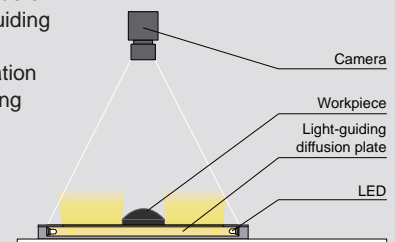
- External/internal diameter
- Wavelength/color
- Increase output
- Cable length
- Illuminating angle
- Format/material
- Connector format
- Installation/mounting

Etc.

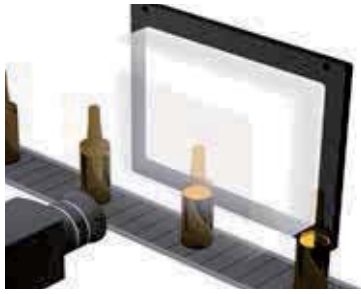
Example Configuration

LEDs embedded around the outside of a square light-guiding diffusion plate. Diffused illumination from a flat emitting surface.

LFL-100



Imaging Example: Imaging the Liquid Level in Glass Containers



Description	Liquid volume inspection
Workpiece	Glass containers
Conventional lighting	LED Ring Light
New lighting	LFL-180SW2
Result	Emphasizes the level of the liquid

Workpiece image



Glass containers

LED Ring Light



It is difficult to form an image of the liquid level due to surface reflection.

LFL-180SW2



It is possible to form an image of the liquid level without surface reflection.

Imaging Example: Imaging the Liquid Level in Plastic Containers



Description	Liquid volume inspection
Workpiece	Plastic containers
Conventional lighting	LED Ring Light
New lighting	LFL-180SW2
Result	Emphasizes the level of the liquid

Workpiece image



Plastic containers

LED Ring Light



It is difficult to form an image of the liquid level due to surface reflection.

LFL-180SW2



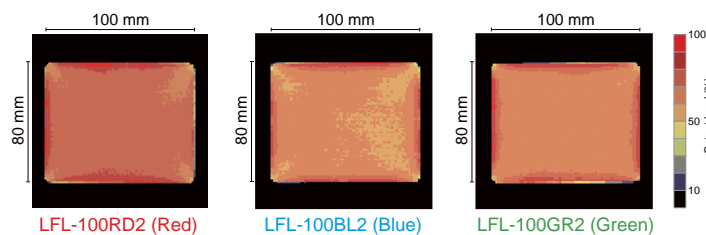
It is possible to form an image of the liquid level without surface reflection.

Data: Uniformity (Representative Example)

LFL-100

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

Uniformity (Relative radiance)



- Direct Lighting
 - LDR2
 - LDR2-LA
 - LDR-LA1
 - SQR
 - SQR-TP
- Diffused Lighting
 - HPR2
 - LFR
 - LKR
 - FPR
 - FPQ2
- Direct Lighting
 - LDL2
 - LDLB
 - HLDL2
 - HL
 - TH2 (5 types)
 - TH
- Diffused Lighting
 - 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
- Infrared Lighting
 - IR2
- Intensity Control
 - 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
 - LNV
- Oblique-Angled Lighting
 - LNDG
 - LNIS2
 - LNIS
 - LNIS-FN
- Lenses
 - Telecentric Lens
 - Macro Lens

LFL Series



Lineup

“-P” at the end of the model name: Type with an affixing plate

Model name	LED color	Power consumption	Peak wavelength / correlated color temperature	Options	Extension cables	Recommended Control Units	Weight				
LFL-612RD2*1	Red	24 V / 0.6 W	630 nm	-		<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3*1</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">POD*2</div> </div>	25 g				
LFL-612SW2	White	24 V / 0.4 W	5,500 K				20 g				
LFL-612BL2	Blue		470 nm				25 g				
LFL-612GR2	Green		525 nm								
LFL-612RD2-P*1	Red	24 V / 0.6 W	630 nm				-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">POD*2</div> </div>	25 g		
LFL-612SW2-P	White	24 V / 0.4 W	5,500 K						25 g		
LFL-612BL2-P	Blue		470 nm								
LFL-612GR2-P	Green		525 nm								
LFL-1012RD2	Red	24 V / 0.6 W	630 nm						-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">FCB*4 Straight Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FCB-W*5 2-branch Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FCB-F 4-branch Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FRCB Robot Cable</div> </div>	35 g
LFL-1012SW2	White	24 V / 0.8 W	5,500 K								30 g
LFL-1012BL2	Blue		470 nm								
LFL-1012GR2	Green		525 nm								35 g
LFL-1012RD2-P	Red	24 V / 0.6 W	630 nm	-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">FCB*4 Straight Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FCB-W*5 2-branch Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FCB-F 4-branch Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FRCB Robot Cable</div> </div>	35 g					
LFL-1012SW2-P	White	24 V / 0.8 W	5,500 K			30 g					
LFL-1012BL2-P	Blue		470 nm								
LFL-1012GR2-P	Green		525 nm			35 g					
LFL-3212RD2	Red	24 V / 1.6 W	630 nm			-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">FCB*4 Straight Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FCB-W*5 2-branch Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FCB-F 4-branch Cable</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">FRCB Robot Cable</div> </div>	80 g			
LFL-3212SW2	White	24 V / 2.3 W	5,500 K					80 g			
LFL-3212BL2	Blue		470 nm								
LFL-3212GR2	Green		525 nm					80 g			
LFL-4012RD2	Red	24 V / 2.1 W	630 nm					-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">POD*2</div> </div>	105 g	
LFL-4012SW2	White	24 V / 2.7 W	5,500 K							110 g	
LFL-4012BL2	Blue		470 nm								
LFL-4012GR2	Green		525 nm							105 g	
LFL-50RD2	Red	24 V / 2.1 W	630 nm	-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">POD*2</div> </div>					50 g	
LFL-50SW2	White	24 V / 3.1 W	5,500 K							50 g	
LFL-50BL2	Blue		470 nm								
LFL-50GR2	Green		525 nm							50 g	
LFL-100RD2	Red	24 V / 5.1 W	630 nm			-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">POD*2</div> </div>			215 g	
LFL-100SW2	White	24 V / 5.3 W	5,500 K							220 g	
LFL-100BL2	Blue		470 nm								
LFL-100GR2	Green		525 nm							215 g	
LFL-180RD2	Red	24 V / 7.1 W	630 nm					-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">POD*2</div> </div>	375 g	
LFL-180SW2	White	24 V / 9.1 W	5,500 K							370 g	
LFL-180BL2	Blue		470 nm								
LFL-180GR2	Green		525 nm							375 g	
LFL-200RD2	Red	24 V / 12 W	630 nm	-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB</div> <div style="border: 1px solid black; padding: 2px;">POD*2</div> </div>					500 g	
LFL-200SW2	White		5,500 K							495 g	
LFL-200BL2	Blue		470 nm								
LFL-200GR2	Green		525 nm								
LFL-360RD2	Red	24 V / 30 W	630 nm			-	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">PD3</div> <div style="border: 1px solid black; padding: 2px;">CC-ST-1024</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px;">PSB*3</div> <div style="border: 1px solid black; padding: 2px;">POD*2</div> </div>			2,360 g	
LFL-360SW2	White	24 V / 37 W	5,500 K							2,320 g	
LFL-360BL2	Blue		470 nm								

*4 The cables with a model name that ends with “-ME7”, “-EL2”, “-PF”, or “-PF-EL9” are not included.
*5 The cables with a model name that ends with “-EL2” are not included.

LED Properties: Spectral Distribution ▶ P.326

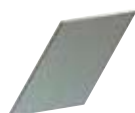
Extension Cables ▶ P.308

Control Unit Selection Guide ▶ P.251

List of Control Unit Specifications ▶ P.253

*1 These red lights cannot be used with the PD3-5024-4-SI or PD3-5024-4-ET Control Unit.

Options



In this plastic film are fine louvers with extremely narrow gaps between them. It reduces light diffusion in a particular direction and increases parallelism.

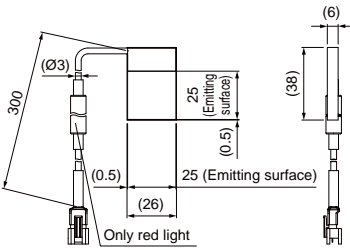
Light control film

Model name	Applicable Light Unit (Common for all colors)
LC-LFL-100	LFL-100
LC-LFL-180	LFL-180
LC-LFL-200	LFL-200

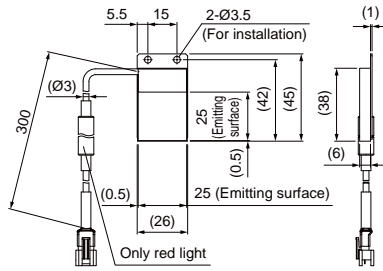
▶ P.304

Dimensions (mm)

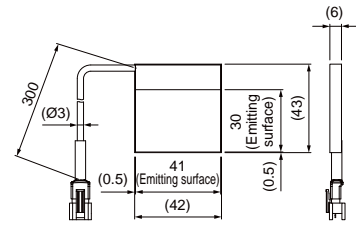
LFL-612RD2/SW2/BL2/GR2



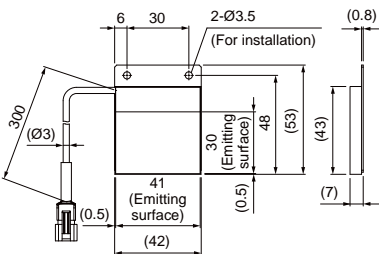
LFL-612RD2-P/SW2-P/BL2-P/GR2-P



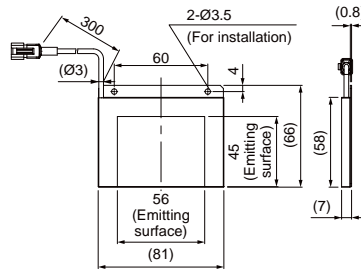
LFL-1012RD2/SW2/BL2/GR2



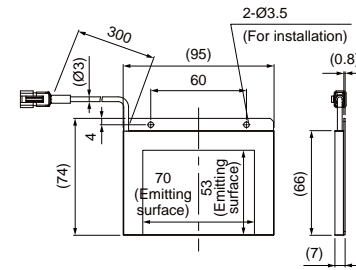
LFL-1012RD2-P/SW2-P/BL2-P/GR2-P



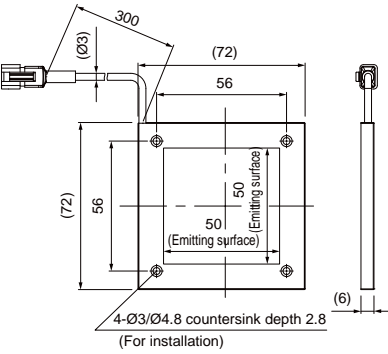
LFL-3212RD2/SW2/BL2/GR2



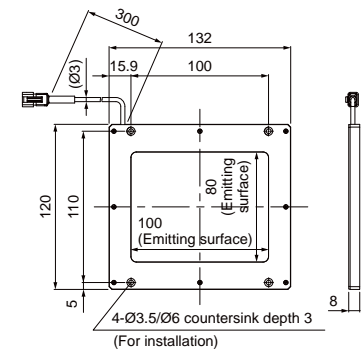
LFL-4012RD2/SW2/BL2/GR2



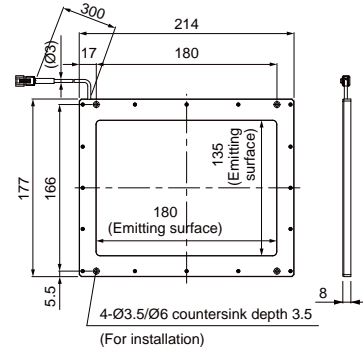
LFL-50RD2/SW2/BL2/GR2



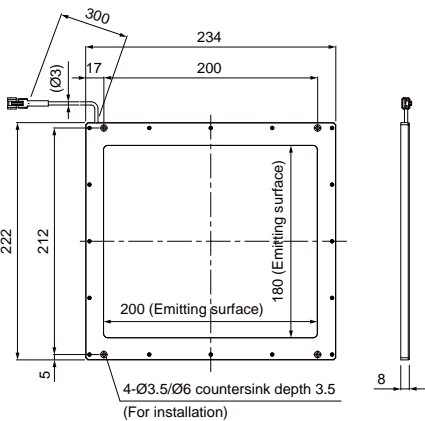
LFL-100RD2/SW2/BL2/GR2



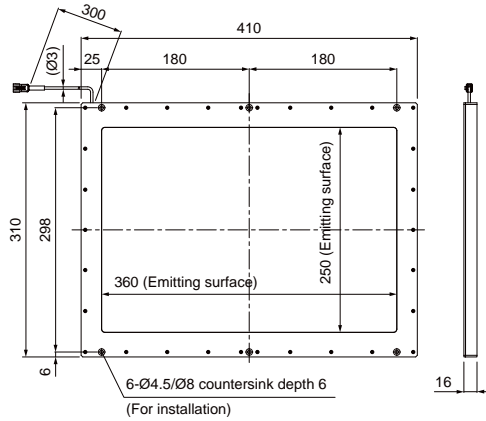
LFL-180RD2/SW2/BL2/GR2



LFL-200RD2/SW2/BL2/GR2



LFL-360RD2/SW2/BL2



You can change the connectors of the Light Unit cable. Choose between M12 connectors and flying leads. Refer to P.5 for details.

You can inquire using our website.

- Sample Testing
- Light Unit Selection
- Free Product Trial
- Custom Orders
- Product Details
- Pricing/Quotation
- Discontinued Products

Direct Lighting	LDR2 LDR2-LA LDR-LA1 SQR SQR-TP
Diffused Lighting	HPR2 LFR LKR FPR FPQ2
Direct Lighting	LDL2 LDLB HLDL2
Direct Lighting	HL TH2 (5 types) TH
Diffused Lighting	LFL HPD2 LDM2 LAV PDM LFX3 LFX3-PT LFV3
Commaed Lighting	MSU MFU
Strobe Lighting	PF
Water-proof	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV 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
Oblique/Angled Lighting	LVN LNDG LNS2 LNS LNS-FN
Lenses	Telecentric Lens Macro Lens