

Flat Lights

LFL series

Refer to our website for product details.

CCS LFL

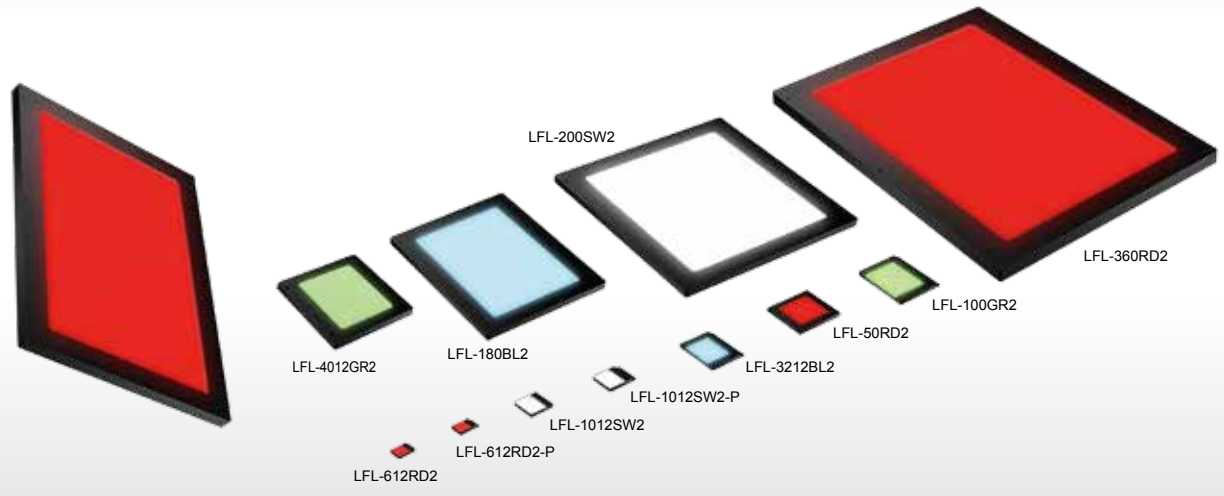
Search



You can also use your smartphone or cell phone.

Use a search engine.

Diffused illumination from a flat emitting surface

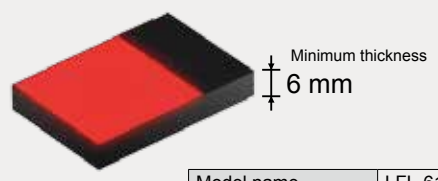


Applications Dimension measuring, visual inspection, foreign material inspections, liquid level inspection, burr inspection for metal parts, and inspection for tears / stains on packaging, etc.

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.

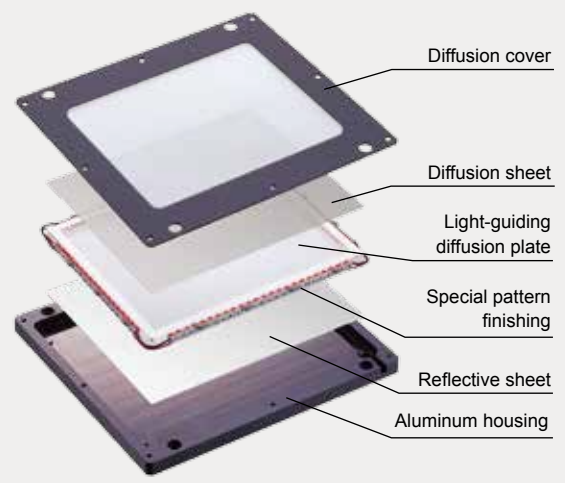


Model name	LFL-612RD2
Power consumption	24 V / 0.6 W
Weight	25 g

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.

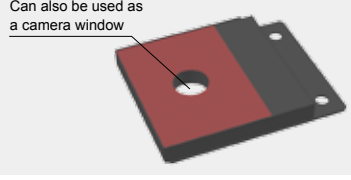
Cross-section image of the LFL-100



Custom orders

Please contact your CCS 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

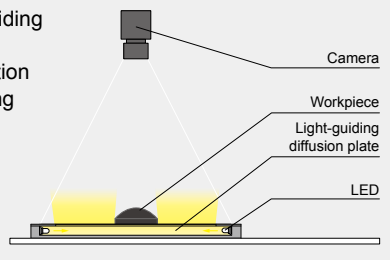


- Customizable items**
- External/internal diameter
 - Wavelength/color
 - Increase output
 - Cable length
 - Illuminating angle
 - Format/material
 - Connector format
 - Installation/mounting
- Etc.

Example configuration

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

LFL-100



- LDR2
- LDR2-LA
- LDR-LA1
- SQR
- SQR-TP
- HLDR-IP
- HPR2
- HPR
- LFR
- LKR
- FPR
- FPQ2
- LDL2
- LDLB
- HLDL2
- TH
- LFL**
- HPD2
- HPD
- LDM2
- LAV
- PDM
- LFX2
- LFV3
- LFV2
- MSU
- MFU
- UV2
- UV
- LNSP-UV-FN
- IR2
- HLV2
- LV
- LSP
- HFS/HFR
- HLV2-NR
- HLV2-3M-RGB-3W
- PFB2
- PFBR
- LNSP
- CU-LNSP
- LNSP-FN
- LN/LN-HK
- LNSD
- LND2
- HLND
- LT
- LNW/HLDN
- LNIS
- LNIS-FN
- Telecentric Lens
- Macro Lens

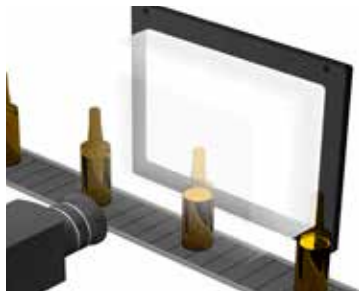
We have various materials.

- PDF Drawings
- DXF Drawings
- 3D CAD
- Instruction Guides
- Product Filers
- Imaging Samples
- Data Sheets
- Examples of Custom Ordered Products

Download here. <http://www.ccs-grp.com/dl/>

LDR2
LDR2-LA
LDR-LA1
SQR
SQR-TP
HLDR-IP
HPR2
HPR
LFR
LKR
FPR
FPQ2
LDL2
LDLB
HLDL2
TH
LFL
HPD2
HPD
LDM2
LAV
PDM
LFX2
LFX3
LFX2
MSU
MFU
UV2
UV
LNSP-UV-FN
IR2
HLV2
LV
LSP
HFS/HFR
HLV2-NR
HLV2-3M-RGB-3W
PFB2
PFBR
LNSP
CU-LNSP
LNSP-FN
LN/LN-HK
LNSD
LND2
HLND
LT
LVN/HLDN
LNIS
LNIS-FN
Telecentric Lens
Macro Lens

➤ Imaging example : Imaging of the level of liquid inside a glass container



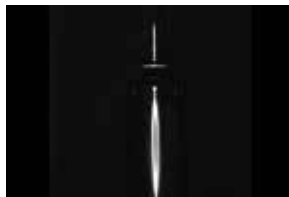
Description	Liquid volume inspection
Workpiece	Glass container
Before the proposal	LED Ring Light
After the proposal	LFL-180SW2
Result	Emphasizes the level of the liquid

Workpiece image



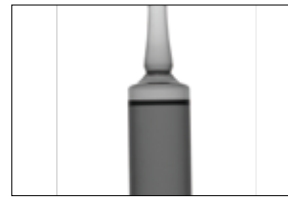
Glass container

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 of the level of liquid inside a plastic container



Description	Liquid volume inspection
Workpiece	Plastic container
Before the proposal	LED Ring Light
After the proposal	LFL-180SW2
Result	Emphasizes the level of the liquid

Workpiece image



Plastic container

LED Ring Light



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

LFL-180SW2



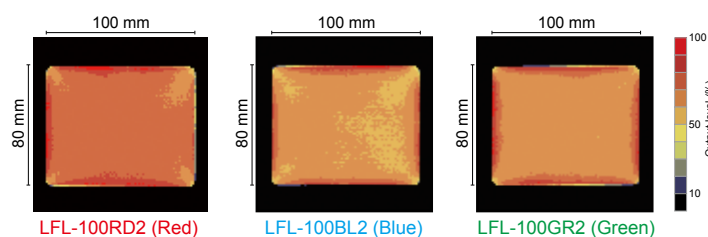
It is possible to form an image of the liquid level without surface reflection.

➤ Data : Uniformity graph (Representative example)

LFL-100

*The graph included is for reference only and does not guarantee the quality of this product.

Uniformity graph (Relative radiance)



LFL series



Refer to our website for product details.

CCS LFL

Search



You can also use your smartphone or cell phone.

Use a search engine.

Lineup * End of the model name: -P: Type with an affixing plate

Model name	LED color	Power consumption	Peak wavelength/ correlated color temperature	Options	Recommended Control Units	Weight
LFL-612RD2*1	Red	24 V / 0.6 W	630 nm	-	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	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	-	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	25 g
LFL-612SW2-P	White	24 V / 0.4 W	5,500 K			
LFL-612BL2-P	Blue		470 nm			
LFL-612GR2-P	Green	525 nm				
LFL-1012RD2	Red	24 V / 0.6 W	630 nm	-	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	35 g
LFL-1012SW2	White	24 V / 0.8 W	5,500 K			30 g
LFL-1012BL2	Blue		470 nm			35 g
LFL-1012GR2	Green	525 nm				
LFL-1012RD2-P	Red	24 V / 0.6 W	630 nm	-	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	35 g
LFL-1012SW2-P	White	24 V / 0.8 W	5,500 K			30 g
LFL-1012BL2-P	Blue		470 nm			35 g
LFL-1012GR2-P	Green	525 nm				
LFL-3212RD2	Red	24 V / 1.6 W	630 nm	-	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	80 g
LFL-3212SW2	White	24 V / 2.3 W	5,500 K			
LFL-3212BL2	Blue		470 nm			
LFL-3212GR2	Green	525 nm				
LFL-4012RD2	Red	24 V / 2.1 W	630 nm	-	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	105 g
LFL-4012SW2	White	24 V / 2.7 W	5,500 K			110 g
LFL-4012BL2	Blue		470 nm			105 g
LFL-4012GR2	Green	525 nm				
LFL-50RD2	Red	24 V / 2.1 W	630 nm	Light control film	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	50 g
LFL-50SW2	White	24 V / 3.1 W	5,500 K			
LFL-50BL2	Blue		470 nm			
LFL-50GR2	Green	525 nm				
LFL-100RD2	Red	24 V / 5.1 W	630 nm	Light control film	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	215 g
LFL-100SW2	White	24 V / 5.3 W	5,500 K			220 g
LFL-100BL2	Blue		470 nm			215 g
LFL-100GR2	Green	525 nm				
LFL-180RD2	Red	24 V / 7.1 W	630 nm	Light control film	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	375 g
LFL-180SW2	White	24 V / 9.1 W	5,500 K			370 g
LFL-180BL2	Blue		470 nm			375 g
LFL-180GR2	Green	525 nm				
LFL-200RD2	Red	24 V / 12 W	630 nm	-	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024 <input type="checkbox"/> PSB <input type="checkbox"/> PTU2	500 g
LFL-200SW2	White		5,500 K			
LFL-200BL2	Blue		470 nm			
LFL-200GR2	Green		525 nm			
LFL-360RD2	Red	24 V / 30 W	630 nm	-	<input type="checkbox"/> PD3 <input type="checkbox"/> PSB*	2,360 g
LFL-360SW2	White	24 V / 37 W	5,500 K			2,320 g
LFL-360BL2	Blue	24 V / 38 W	470 nm			

LED Properties: Light Spectrum ▶ P.234

Extension Cables ▶ P.222

Control Unit Selection Guide ▶ P.181

Control Unit Page ▶ P.185

*1: Cannot be used with the Digital Control Unit PD3-5024-4/10024-8 series.

Options



This is a plastic film which lines up fine louvers with an extremely narrow gap between them. It reduces light diffusion in a certain 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.218

We have various materials.

PDF Drawings

DXF Drawings

3D CAD

Instruction Guides

Product Filers

Imaging Samples

Data Sheets

Examples of Custom Ordered Products

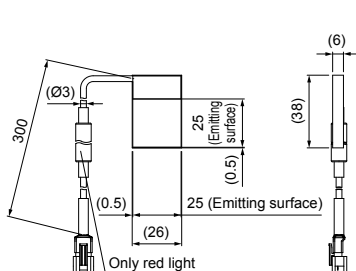
Download here.

<http://www.ccs-grp.com/dl/>

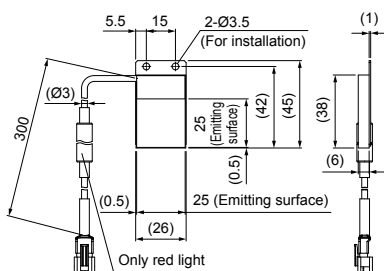
Direct Lighting	LDR2
	LDR2-LA
	LDR-LA1
	SQR
Convergent Lighting	SQR-TP
	HLDR-IP
Diffused Lighting	HPR2
	HPR
	LFR
	LKR
	FPR
FPQ2	
Direct Lighting	LDL2
	LDLB
	HLDL2
Diffused Lighting	TH
	LFL
	HPD2
	HPD
	LDM2
	LAV
	PDM
	LFX2
	LFV3
	LFV2
Calculated Lighting	MSU
	MFU
Ultraviolet Lighting	UV2
	UV
Infrared Lighting	LNSP-UV-FN
	IR2
Spot Lighting, Etc.	HLV2
	LV
	LSP
	HFS/HFR
	HLV2-NR
Convergent Lighting	HLV2-3M-RGB-3W
	PFB2
	PFBR
Diffused Lighting	LNSP
	CU-LNSP
	LNSP-FN
Oblique Angled Lighting	LN/LN-HK
	LNLD
Lenses	LND2
	HLND
	LT
Lenses	LN/HLDN
	LNIS
Lenses	LNIS-FN
	Telecentric Lens
Lenses	Macro Lens

Dimensions (mm)

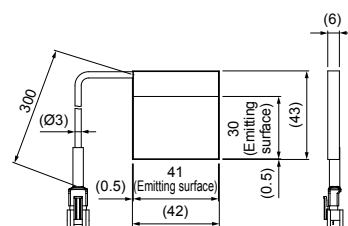
LFL-612RD2/SW2/BL2/GR2



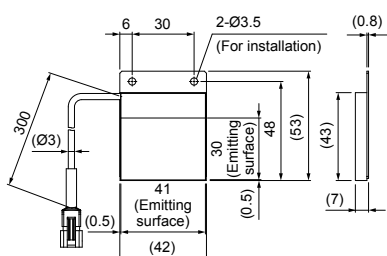
LFL-612RD2-P/SW2-P/BL2-P/GR2-P



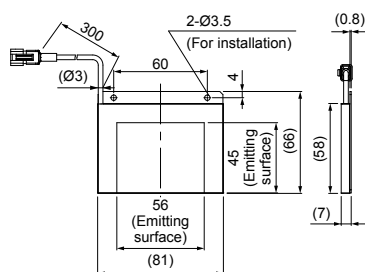
LFL-1012RD2/SW2/BL2/GR2



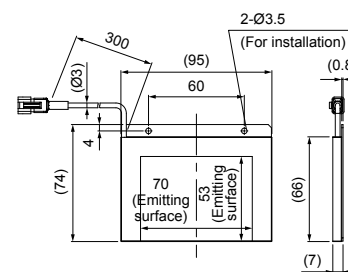
LFL-1012RD2-P/SW2-P/BL2-P/GR2-P



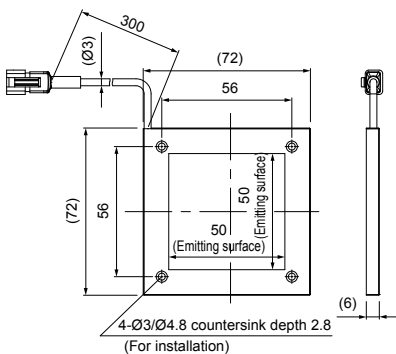
LFL-3212RD2/SW2/BL2/GR2



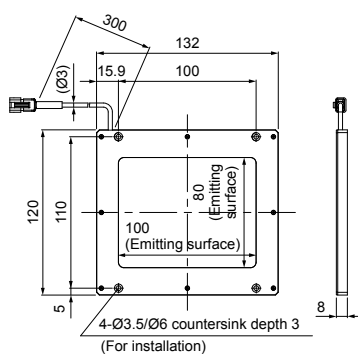
LFL-4012RD2/SW2/BL2/GR2



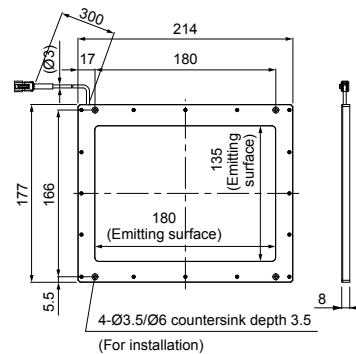
LFL-50RD2/SW2/BL2/GR2



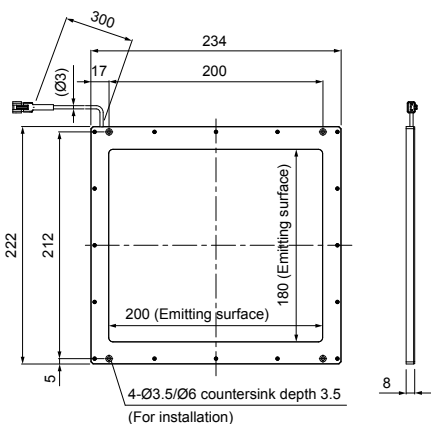
LFL-100RD2/SW2/BL2/GR2



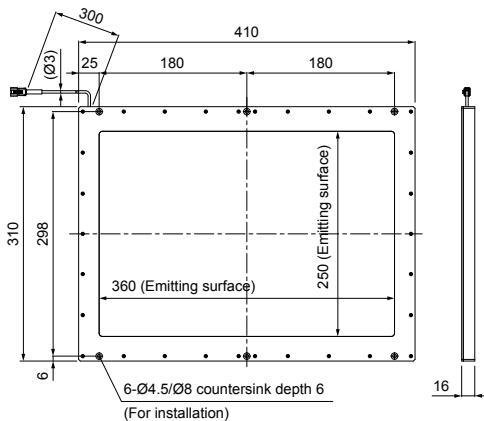
LFL-180RD2/SW2/BL2/GR2



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.125 for details.

You can inquire using
our website.

Requests for
Light Unit
Selection

Requests for
Loan
Products

Requests for
Estimates

Requests for
a Catalog

Product
Inquiries

Other
Inquiries

Inquire on our website here.
<http://www.ccs-grp.com/contact/>