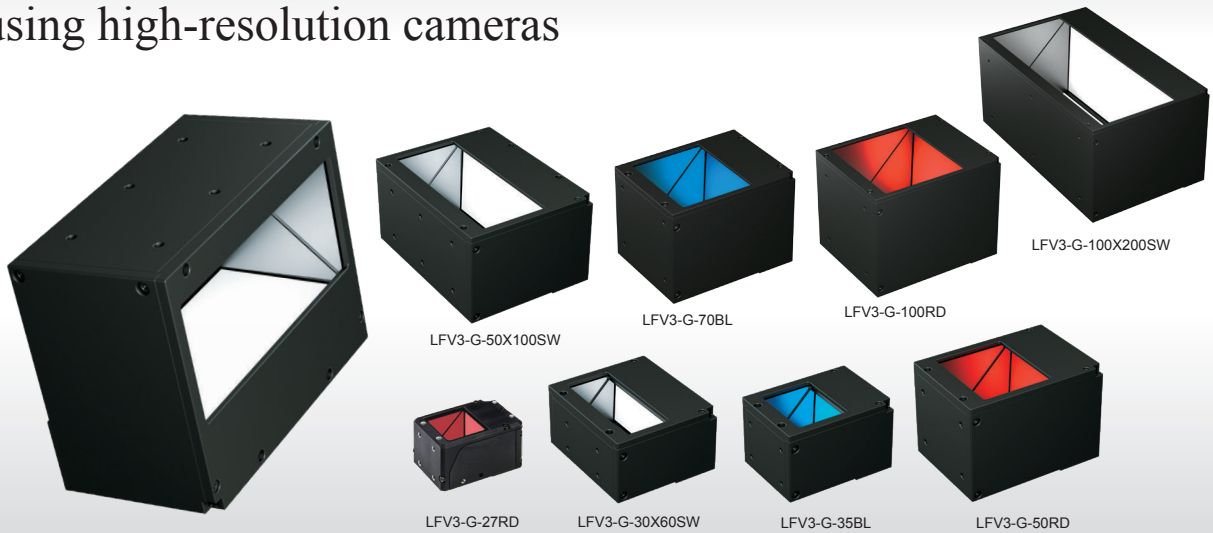




You can also use your smartphone or cell phone.

Equipped with a slim half mirror to support imaging using high-resolution cameras

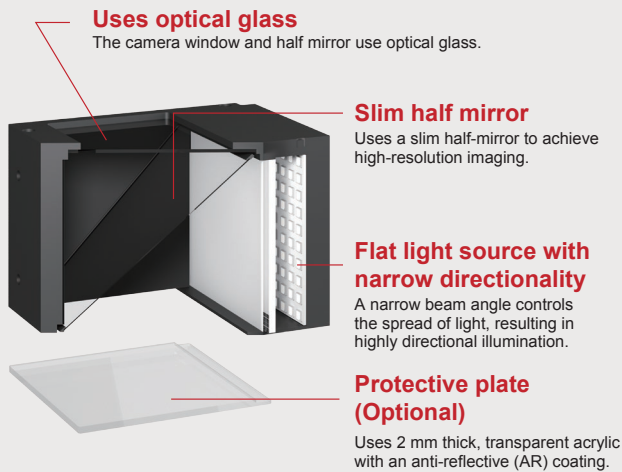


Applications

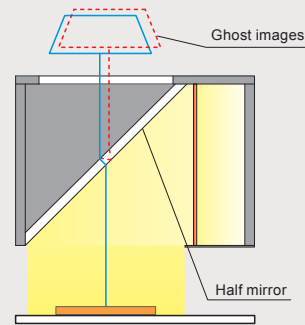
Inspection for damage, scratches, or dents on glossy surfaces or mirrors; pattern inspection on printed circuit boards; dimension measuring of glass; inspection for damage and dents on resin molded products; etc.

Prevents ghost images and achieves higher resolution imaging than conventional products.

LFV3-G Series structure (example)



Causes of ghost images (example)



A thick half mirror causes deviations in the light path, generating ghost images. Using a thinner mirror reduces the deviation of the ghost images, enabling high-resolution imaging.

Custom Orders

E.g.: Different shape

E.g.: Different color

Format/material

Change the illuminating port from vertical to horizontal

Wavelength/color

Full color (RGB) Light Unit

External/internal diameter

Wavelength/color

Increase output

Cable length

Illuminating angle

Format/material

Connector format

Installation/mounting

Etc.

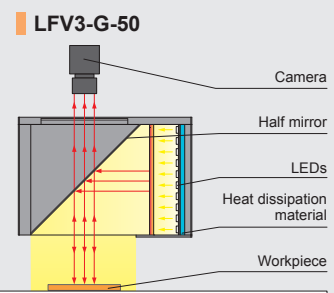
Camera window

Illuminating port

Please contact your CCS sales representative.

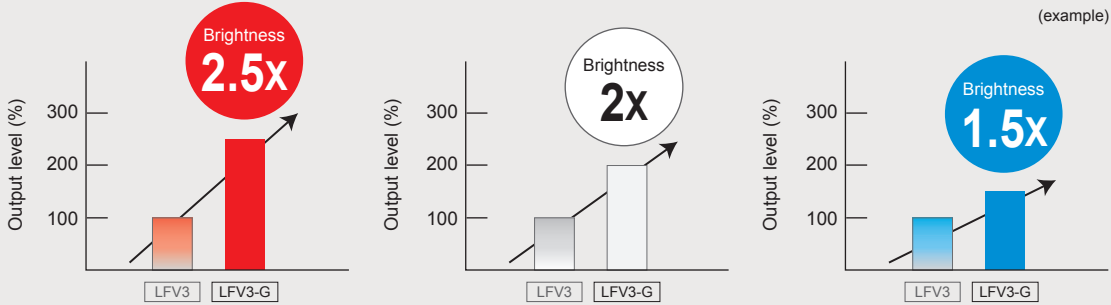
Example Configuration

Diffused light from the LEDs is reflected on the half mirror and directed vertically downward on the same axis as the camera axis. By using a slim half mirror, imaging with reduced ghosting is possible.



➤ Achieves up to 2.5 Times Higher Output Compared to LFBV3

Can be combined with the strobe overdrive power supply POD Series to further increase the brightness several times more.



In comparison with light colors of the LFBV3 Series. (These values are for reference only and are not guaranteed values.)

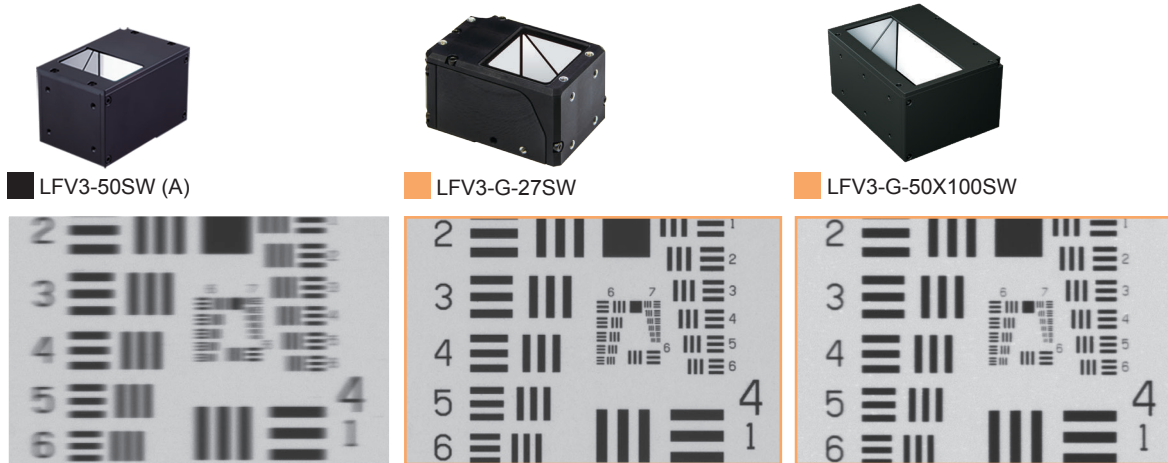
Strobe Overdrive Power Supply
POD Series

▶ P.339



Even
brighter
with the strobe
overdrive power
supply

➤ Imaging Example: Imaging Comparison of Resolution Evaluation Chart



[Imaging conditions] Camera: 2448x2048 3.45 μm monochrome camera, Lens: 2x telecentric lens, Field of view: 4.2 x 3.5 mm (the image is a cutout of about 1.3 x 1.0 mm at the center), Resolution: 1.7 μm/pixel, WD: 110 mm, LWD: 25 mm. * The shutter speed and light intensity are adjusted for each image.

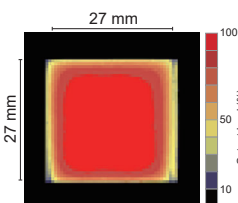
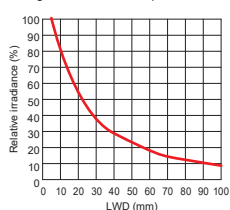
➤ Data: Relative Irradiance Graph and Uniformity (Representative Example)

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

LFBV3-G-27RD

Relative irradiance graph (LWD characteristics)^{*1}
Uniformity (Relative radiance)^{*2}

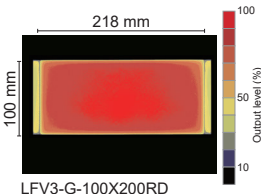
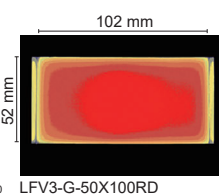
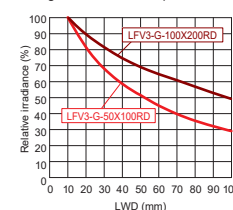
^{*1} Irradiance on the optical axis
^{*2} Illuminating distance from the Light Unit to the workpiece



LFBV3-G-50X100RD (Red) / 100X200RD (Red)

Relative Irradiance Graph (LWD characteristics)^{*1}
Uniformity (Relative radiance)^{*2}

^{*1} Irradiance on the optical axis
^{*2} Illuminating distance from the Light Unit to the workpiece



LDR2 LDR2-LA LDR-LA1 SQR SQR-TP	Direct Lighting
HLDR3	Convergent Lighting
HPR2 LFR LKR FPR FPQ3	Diffused Lighting
LDL2 LDLB HLDL3 HLDL2	Direct Lighting / Convergent Lighting
TH2 (5 types) LFL HPD2 LDM2 LAV PDM LFXV LFX3 LFX3-PT LFBV3 LFBV3-G	Diffused Lighting
MSU MFU	Collimated Lighting
PF	Strobe Lighting
HLDR-IP HSL-PCL	Water-proof
Small COB Lights	COB Lights
UV3/VL3 UV2 UV LNSP-UV3-FN LNSP-UV-FN	UV / Violet Lighting
(Under 1000-nm type) IR (Over 1000-nm Type) CIR	Infrared Lighting
IU	Intensity Control
HLV3 LV LSP HFS/HFR HLV3-22-4-NR HLV3-3M-RGB-4 PFBR-600 PFBR-150 PFB3	Spot Lighting, Etc.
LNL LNLP2 Coaxial Units LNFP-FN LN/LN-HK	Convergent Lighting
LNSD LND2 LT LNV LFXV (Rectangular Type) TH2 (Rectangular Type)	Diffused Lighting
LNDG LNSIS2 LNSIS LNSIS-FN	Oblique Angled Lighting
Telecentric Lens Lenses Macro Lens	

You can inquire using our website.

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

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

LFV3-G Series



Refer to our website for product details.

CCS LFV3-G

Search



You can also use your smartphone or cell phone.

Lineup

Model Name*1	Input Voltage	Power Consumption			Options*2	Extension Cables	Recommended Control Units		Weight
		RD (Red)	SW (White)	BL (Blue)					
LFV3-G-27□□	24 V	5.0 W	5.0 W	5.0 W	Protective Plate	FCB*5 Straight Cable FCB-W*6 2-Branch Cable FCB-F 4-Branch Cable FRCB Robot Cable	PD3	CC-ST-1024	110 g
LFV3-G-30X60□□	24 V	12 W	11 W	8.1 W			PSB	POD*3	165 g
LFV3-G-35□□	24 V	8.4 W	8.3 W	7.1 W			PD3	CC-ST-1024	140 g
LFV3-G-50□□	24 V	17 W	17 W	15 W			PSB	POD*3	285 g
LFV3-G-50X100□□	24 V	34 W	34 W	29 W			PD3		445 g
LFV3-G-70□□	24 V	28 W	25 W	22 W			PSB*7	POD*3	570 g
LFV3-G-100□□	24 V	40 W	37 W	32 W			PD3	POD*3	990 g
LFV3-G-100X200□□	24 V	59 W	59 W	59 W			PSB	POD*3	1,730 g

Extension Cables ▶ P.381

Control Unit Selection Guide ▶ P.321

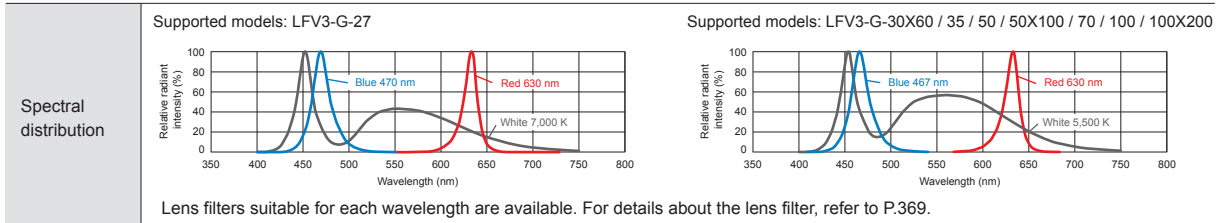
List of Control Unit Specifications ▶ P.323

*1 □□ in the model name contains the LED color. (RD: Red, SW: White, BL: Blue)

*2 If you need to replace the diffusion plate or install a polarizing plate, we can do so as a custom-order.

*3 For information on the combination of the LFV3-G and POD Series, please refer to the CCS website. <https://www.ccs-grp.com/lnk/qtr/pod>

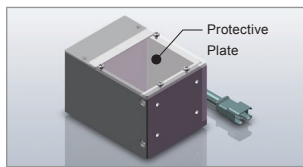
LED Properties



Be sure to read the "Instruction Guide" included with the product before use and follow the safety precautions upon use. The data included is for reference only. Actual values may vary.

For details on the effective field of view when using coaxial lights, see "Effective Field of View of Coaxial Lights" on P. 397.

Options



Protective plates are available to prevent any reductions in performance due to intrusion of foreign matter into the lights. Anti-reflective (AR coating) has been applied. * Be aware that installing a protective plate may reduce image resolution.

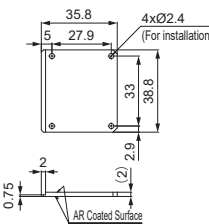
Protective Plate

Accessories:
Pan Head Screws x 5

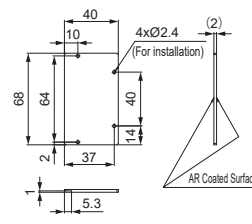
Model name	Applicable Light Unit (Common for all colors)
PR-LFV3-27	LFV3-G-27
PR-LFV3-30X60	LFV3-G-30X60
PR-LFV3-35	LFV3-G-35, LFV3-35(A)
PR-LFV3-50	LFV3-G-50, LFV3-50(A)
PR-LFV3-50X100	LFV3-G-50X100, LFV3-50X100(A)
PR-LFV3-70	LFV3-G-70, LFV3-70(A)
PR-LFV3-100	LFV3-G-100, LFV3-100(A)
PR-LFV3-100X200	LFV3-G-100X200

* Protective plates for products other than the applicable light units listed above are available by custom order.

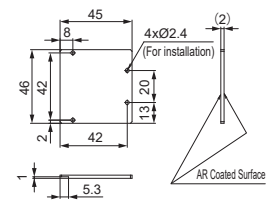
PR-LFV3-27



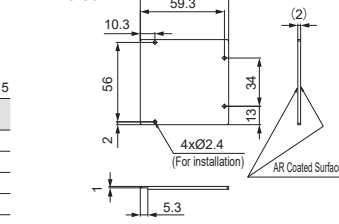
PR-LFV3-30X60



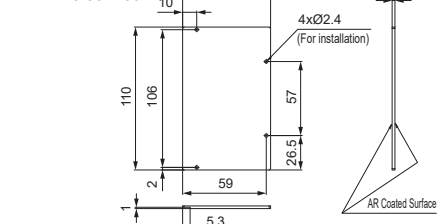
PR-LFV3-35



PR-LFV3-50



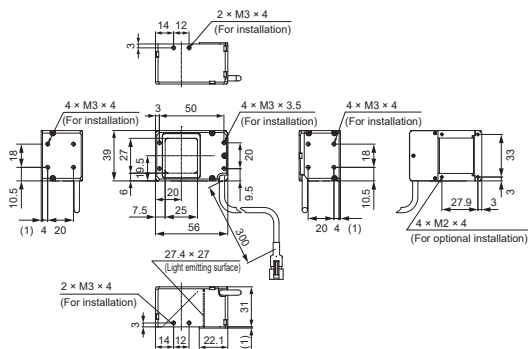
PR-LFV3-50X100



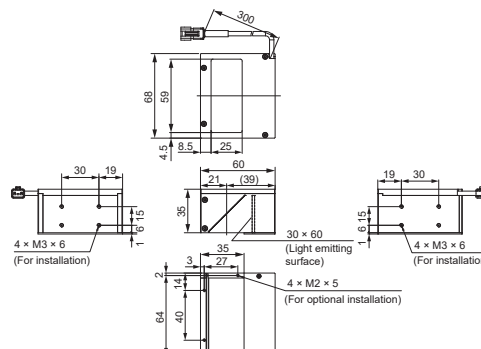
Refer to our website for other external dimensions. <https://www.ccs-grp.com/products/series/318>

➤ Dimensions (mm)

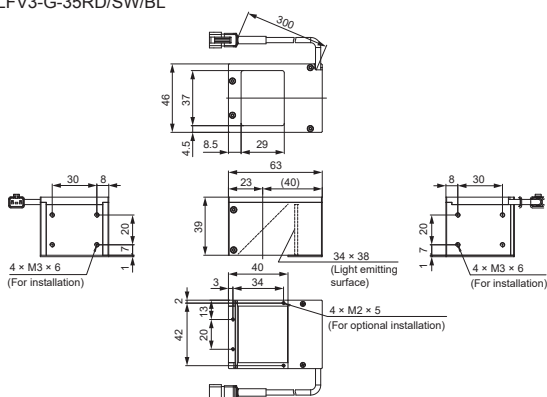
LFV3-G-27RD/SW/BL



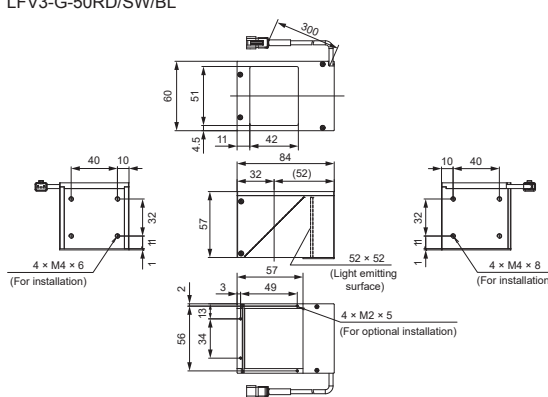
LFV3-G-30X60RD/SW/BL



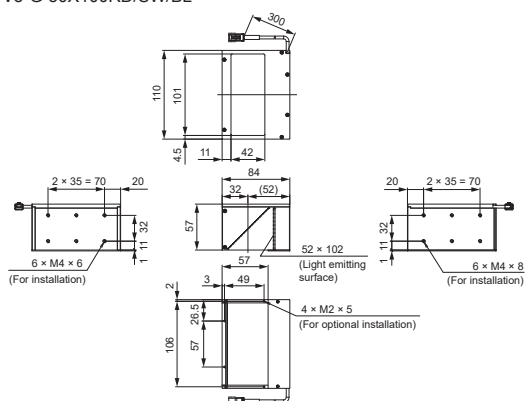
LFV3-G-35RD/SW/BL



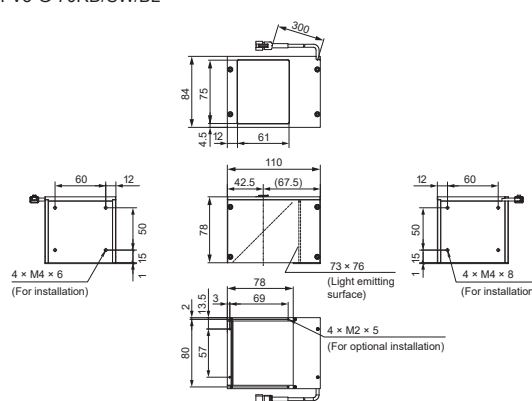
LFV3-G-50RD/SW/BL



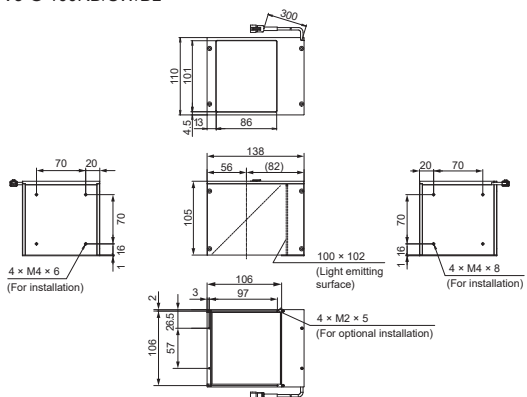
LFV3-G-50X100RD/SW/BL



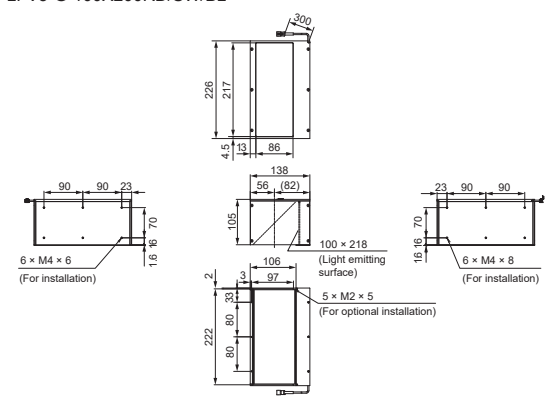
LFV3-G-70RD/SW/BL



LFV3-G-100RD/SW/BL



LFV3-G-100X200RD/SW/BL



You can change the connectors of the Light Unit cable. Choose between M12 connectors and flying leads. Refer to P.19 for details.

You can inquire using our website.

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

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

LDR2	Direct Lighting	
LDR2-LA	Direct Lighting	
LDR-LA1	Direct Lighting	
SQR	Direct Lighting	
SQR-TP	Direct Lighting	
HLDR3	Convergent Lighting	
HPR2	Diffused Lighting	
LFR		
LKR		
FPR		
FPQ3		
LDL2	Direct Lighting / Convergent Lighting	
LDLB		
HLDL3		
HLDL2		
TH2 (5 types)	Diffused Lighting	
LFL		
HPD2		
LDM2		
LAV		
PDM		
LFXV		
LFX3		
LFX3-PT		
LFV3		
LFV3-G	Colimated Lighting	
MSU		
MFU		
PF		Stroke Lighting
HLDR-IP		Water-proof
HSL-PCL		
Small COB Lights		COB Lights
UV3/VL3		
UV2		UV / Violet Lighting
UV		
LNSP-UV3-FN		
LNSP-UV-FN	IR / Infrared Lighting	
(Under 1000-nm Type)		
(Over 1000-nm Type)		
CIR	Intensity Control	
IU		
HLV3		
LV	HFS/HFR Spot Lighting, Etc.	
LSP		
HFS/HFR		
HLV3-22-4-NR		
HLV3-3M-RGB-4		
PFBR-600		
PFBR-150		
PFB3	Convergent Lighting	
LNLP		
LNSP2		
Coaxial Units	Convergent Lighting	
LNFP-FN		
LN/LN-HK	Diffused Lighting	
LNLD		
LNLD2		
LT		
LNV		
LFXV (Rectangular Type)	Oblique Angled Lighting	
TH2 (Rectangular Type)		
LNLDG		
LNIS2	Macro Lens	
LNIS		
LNIS-FN		
Telecentric Lens		
Macro Lens		