

Achieves a uniform region with a high degree of freedom by using a unique illuminating mechanism

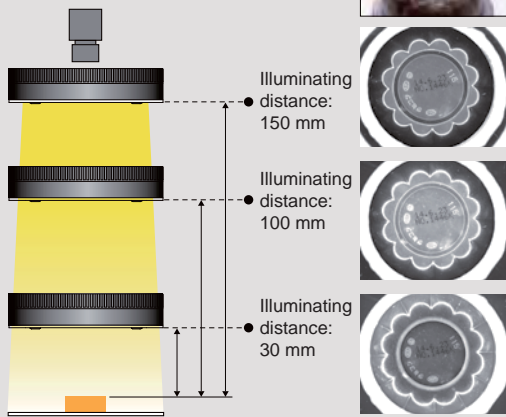


Applications Inspection for damage or stains, visual and color determination inspections, character recognition, text inspection, high angle uniform illumination, characteristic extraction at low angle, etc.

Supports from Low Angles to High Angles

Provides diffused light from the LEDs without waste using a unique illuminating mechanism. Even if the distance from the workpiece to the Light Unit is changed, there is little variation in the uniform region and it can therefore be used for a wide variety of uses.

Achieves a uniform region with a high degree of freedom

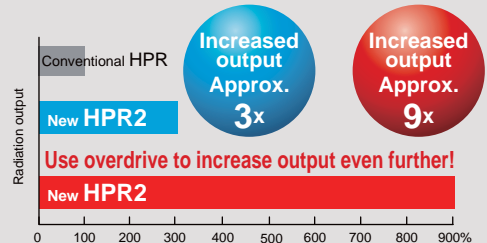


Provides Diffused Light at High Output

It achieves uniform illumination of diffused light at high output using surface-mounted LEDs and a specially processed diffusion plate.

Achieved higher output than the conventional product

Output comparison with the conventional product



- This is a comparison between the HPR-100 and HPR2-100 Light Units, using red and white colors.
- It can be combined with a Strobe Control Unit for even brighter emission than continuous emission.
- The data included is for reference only. Actual values may vary.

Added two sizes and a full color (RGB) type

We added the HPR2-75 and HPR2-200 models. Also, we added a full color (RGB) type to the lineup as variation for wavelengths, increasing the applications of our products.

Custom Orders

Please contact your sales representative.

E.g.: Different shape

Format/material Changed the format to a semicircle to match the workpiece.



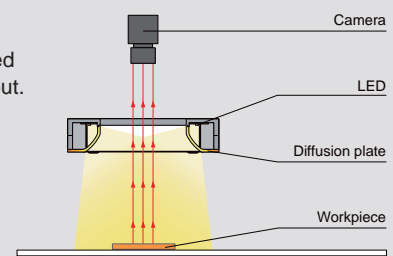
Customizable items

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

Example Configuration

Uses a unique illuminating mechanism to illuminate diffused light at high output.

HPR2-100



Imaging Example: Imaging Text on Electronic Parts



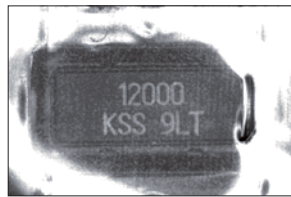
Description	Printing inspection
Workpiece	Electronics parts in embossed tapes
Conventional lighting	LED Ring Light
New lighting	HPR2-75RD
Result	Improved uniformity

Workpiece image



Electronics parts in embossed tapes

LED Ring Light



Stable inspection is difficult due to surface reflection.

HPR2-75RD



Surface reflection is reduced and an image of the text can be made.

Imaging Example: Imaging the Appearance of Multi-Colored Workpieces

Workpiece image



Smartphone cases



Description	Visual inspection
Workpiece	Smartphone cases
Conventional lighting	-
New lighting	HPR2-200FC: full color (RGB) type
Result	Allows for color determination.

HPR2-200FC: full color (RGB) type



Imaging with red illumination



Imaging with blue illumination



Imaging with green illumination



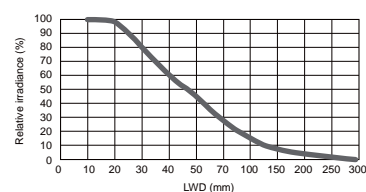
Imaging with white illumination

Data: Relative Irradiance Graph and Uniformity (Representative Example)

HPR2-75SW

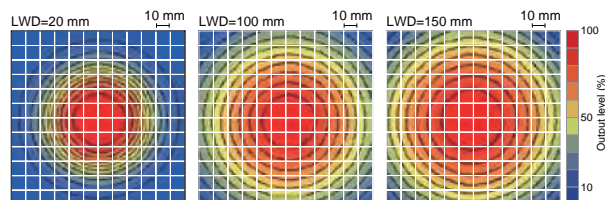
Relative irradiance graph^{*1}
(LWD characteristics)^{*2}

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



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

Uniformity (Relative irradiance)



Direct Lighting

- LDR2
- LDR2-LA
- LDR-LA1
- SQR
- SQR-TP

Diffused Lighting

- HPR2
- LFR
- LKR
- FPR
- FPQ2

Direct Lighting

- LDL2
- LDLB
- HLDL2
- HL

Diffused Lighting

- TH2 (5 types)
- TH
- 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 Control 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
- LT
- LNV

Oblique-Angled Lighting

- LNDG
- LNIS2
- LNIS
- LNIS-FN

Lenses

- Telecentric Lens
- Macro Lens

HPR2 Series



Lineup

Model name	LED color	Power consumption	Peak wavelength / correlated color temperature	Options	Extension cables	Recommended Control Units	Weight		
HPR2-50RD	Red	24 V / 7.6 W	635 nm	Bracket	FCB-W ³ Straight Cable	PD3	46 g		
HPR2-50SW	White	24 V / 9.1 W	6,000 K			CC-ST-1024			
HPR2-50BL	Blue		470 nm			POD ^{*2}			
HPR2-50FC	Red/Green/Blue	24 V / 3.8 W	622 nm/525 nm/470 nm			PD3 ^{*1}			
HPR2-75RD	Red	24 V / 17 W	635 nm			FCB-W ⁴ 2-branch Cable	PD3	160 g	
HPR2-75SW	White	24 V / 16 W	6,000 K				PSB		POD ^{*2}
HPR2-75BL	Blue		470 nm				PD3 ^{*1}		
HPR2-75FC	Red/Green/Blue	24 V / 6.0 W	622 nm/525 nm/470 nm				FCB-F 4-branch Cable		
HPR2-100RD	Red	24 V / 17 W	635 nm				FCB-W ³ Straight Cable	PD3	170 g
HPR2-100SW	White	24 V / 23 W	6,000 K					PSB	
HPR2-100BL	Blue		470 nm	PD3 ^{*1}					
HPR2-100FC	Red/Green/Blue	24 V / 11 W	622 nm/525 nm/470 nm	FCB-F 4-branch Cable	PD3			250 g	
HPR2-150RD	Red	24 V / 27 W	635 nm		PSB				POD ^{*2}
HPR2-150SW	White		6,000 K		PD3 ^{*1}				
HPR2-150BL	Blue	470 nm	FRCB Robot Cable		PD3	380 g			
HPR2-150FC	Red/Green/Blue	24 V / 15 W			622 nm/525 nm/470 nm			PSB	POD ^{*2}
HPR2-200RD	Red	24 V / 34 W			635 nm	PD3 ^{*1}			
HPR2-200SW	White	24 V / 41 W			6,000 K	FCB-W ³ Straight Cable		PD3	510 g
HPR2-200BL	Blue				470 nm		PSB	POD ^{*2}	
HPR2-200FC	Red/Green/Blue	24 V / 19 W			622 nm/525 nm/470 nm		PD3 ^{*1}		
HPR2-250RD	Red	24 V / 45 W			635 nm		FCB-W ⁴ 2-branch Cable	PD3	1,050 g
HPR2-250SW	White	24 V / 46 W		6,000 K	PSB			POD ^{*2}	
HPR2-250BL	Blue			470 nm	PD3 ^{*1}				
HPR2-250FC	Red/Green/Blue	24 V / 24 W		622 nm/525 nm/470 nm	FRCB Robot Cable			PD3	1,050 g
HPR2-400RD-FT	Red	24 V / 45 W	635 nm	PSB				POD ^{*2}	
HPR2-400SW-FT	White	24 V / 46 W	6,000 K	PD3 ^{*1}					
HPR2-400BL-FT	Blue		470 nm	FCB-W ³ Straight Cable				PD3	1,050 g
HPR2-400FC-FT	Red/Green/Blue	24 V / 30 W	622 nm/525 nm/470 nm			PSB		POD ^{*2}	

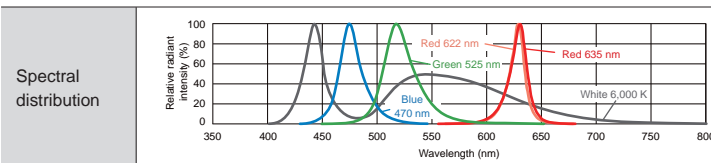
*1 Use a 3-channel Control Unit for a full color (RGB) type.

Extension Cables ▶ P.308

Control Unit Selection Guide ▶ P.251

List of Control Unit Specifications ▶ P.253

LED Properties



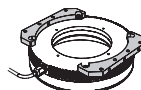
Offers you the most suitable lens filter for each wavelength. For details about the lens filter, refer to P.299.

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.

Options



Combine with the Dome Light HPD2 series to achieve imaging by light switching and simultaneous lighting.



Achieves installation using installation holes with a larger gap than the Light Unit body installation holes, or installation on a vertical surface.

Light joint bracket

Model name	Applicable Light Unit (Common for all colors)
BK-75-JO	HPR2-75 series
BK-100-JO	HPR2-100 series
BK-150-JO	HPR2-150 series
BK-200-JO	HPR2-200 series
BK-250-JO	HPR2-250 series

▶ P.305

Expansion mounting bracket

Model name	Applicable Light Unit (Common for all colors)
BK-50-CI	HPR2-50 series
BK-75-CI	HPR2-75 series
BK-100-CI	HPR2-100 series
BK-150-CI	HPR2-150 series
BK-200-CI	HPR2-200 series
BK-250-CI	HPR2-250 series

▶ P.306

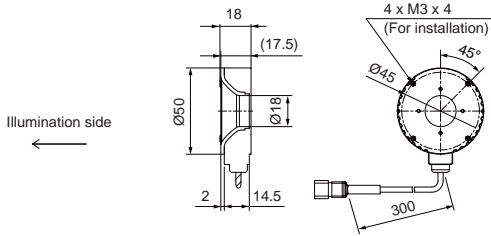
• Example of the expansion mounting bracket in use



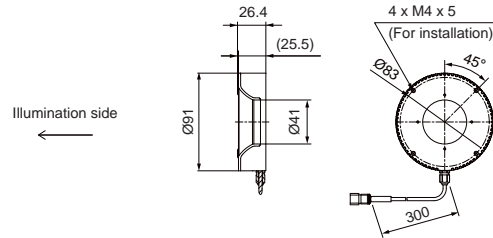
Ring Light: Image of usage with the HPR2-200RD

Dimensions (mm)

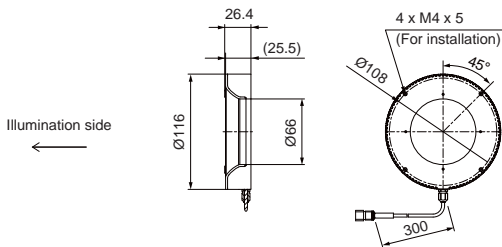
HPR2-50RD/SW/BL/FC



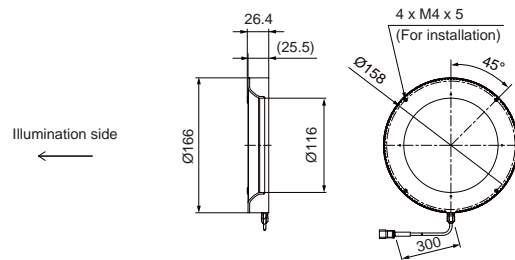
HPR2-75RD/SW/BL/FC



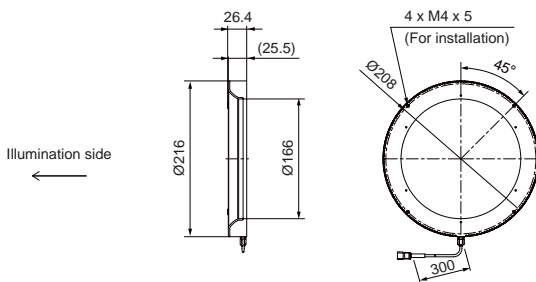
HPR2-100RD/SW/BL/FC



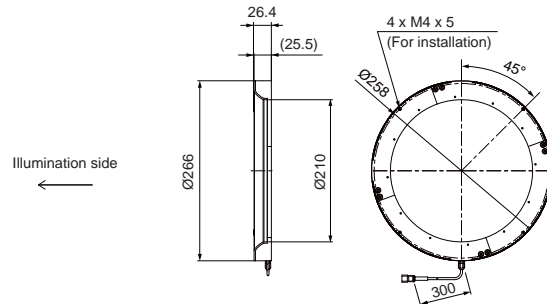
HPR2-150RD/SW/BL/FC



HPR2-200RD/SW/BL/FC

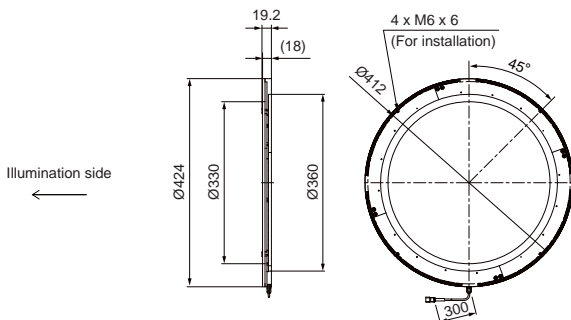


HPR2-250RD/SW/BL/FC

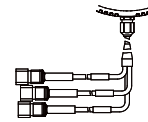


The HPR2-250 model has a curved diffusion plate. Be aware this differs from the conventional product.

HPR2-400RD-FT/SW-FT/BL-FT/FC-FT



The HPR2-400-FT has a flat diffusion plate.



The full color type (HPR2-□□FC, HPR2-400FC-FT) has three connectors. Use a 3-channel Control Unit if controlling intensity separately for each color.

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

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