High Power Dome Light HPD2 Series

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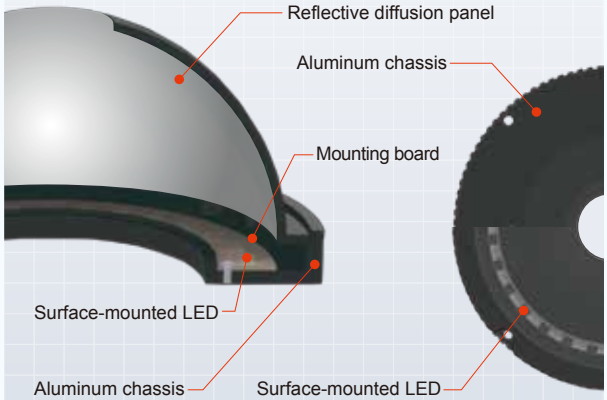
Uniform illumination of high output diffused light

Light from the surface-mounted LED is scattered inside of the dome-shaped reflective diffusion panel. The scattered light from the wide uniform region is illuminated onto the workpiece surface evenly.

- Cross-section structure of the HPD2-100 (conceptual image)



Supports applications for a wide variety of industries

The Dome Lights are applicable for uses in various industry. The usage includes the appearance inspection of the glossy, curved or uneven surface, and also includes the printing inspection, color discrimination inspection and so on.

- Semiconductor industry (Substrate)

HPD2-100SW (White)

- Electronics part industry (Condenser)

HPD2-150SW (White)

- Food industry (Chocolate)

HPD2-250SW (White)

- Packaging industry (Top of a beverage container)

HPD2-150SW (White)

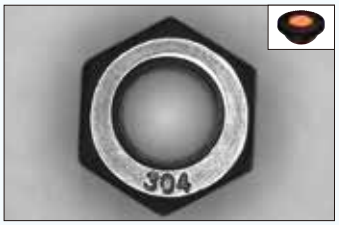
Added size variation

HPD2-75 model NEW!

Applications: Examining the text and exterior of metal parts, etc.

- Imaging via the HPD2-75RD (red)

Workpiece: Nut



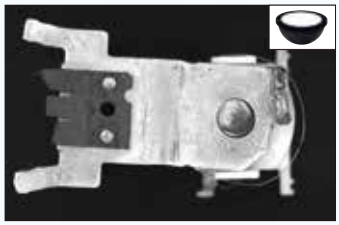
Performs accurate imaging of the engraved text, reducing reflection from the nut surface.

HPD2-200 model NEW!

Applications: Examining faults, engraving, or print on glossy surfaces, etc.

- Imaging via the HPD2-200SW (White)

Workpiece: Metal parts



Performs accurate imaging of the exterior, reducing reflection from the metal surface.

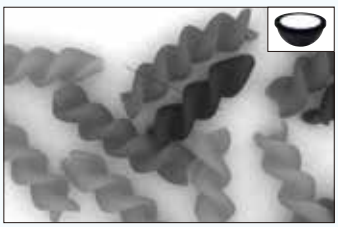
Added wavelength variation

Lineup of infrared types NEW!

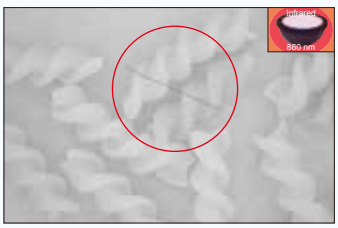
Applications: Examining for foreign material mixed in with food products, examining exterior of packaging, etc.

- Comparison of imaging for the HPD2-200IR860 (infrared) and HPD2-200SW (white)

Workpiece: Macaroni



White light imaging makes differentiating between the foreign material and the macaroni difficult.



Infrared light imaging allows for differentiating between the foreign material and the macaroni.

Added wavelength variation

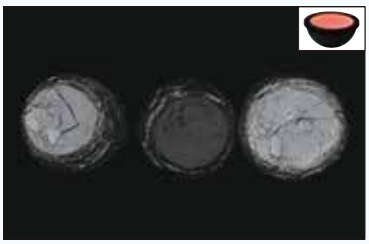
* The change in the radiation amount over time varies for each color (red, green, blue). Periodic adjustments may be necessary after initial radiation settings.

Lineup of full color (RGB) types NEW!

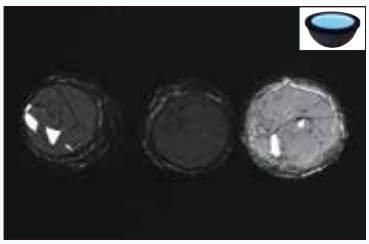
Applications: Examining the exterior by color for multi-colored workpieces, examining the exterior of food products, etc.

● Comparison of imaging via the HPD2-200FC (full color)

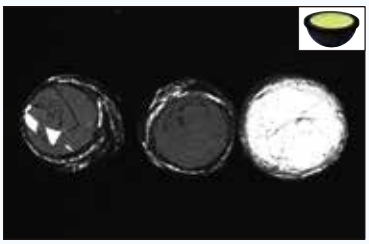
Workpiece: Chocolate



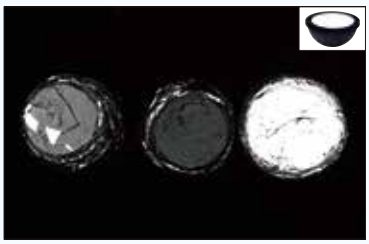
Imaging with red illumination



Imaging with blue illumination



Imaging with green illumination



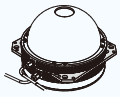
Imaging with white (all colors lit up) illumination

Provided two types of joint brackets

* Not supported for the HPR2-400-FT or HPD2-400 models.

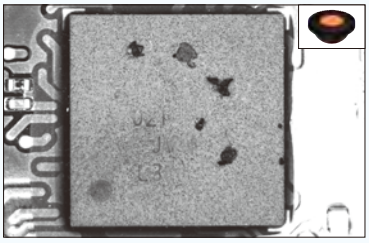
Achieve optimal imaging by combining the Dome Light HPD2 Series with the Ring Light or Coaxial Light. Refer to the rear cover.

Examples of using the light joint bracket

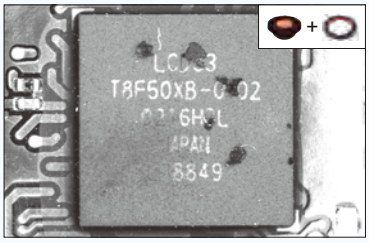


● Comparison of imaging for the HPD2-75RD (red) and the combination with the low angle light LDR-96RD2-LA1 (red)

Workpiece: Electronics part on a substrate

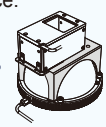


With Dome Light imaging, the surface text is erased but the foreign materials and dirt are captured.



Combining the Dome Light and the low angle light allows for imaging of the text, foreign material, and dirt on the surface.

Examples of using the Coaxial Light joint bracket



● Comparison of imaging for the HPD2-200RD (red) and the combination with the Coaxial Light LFV3-70RD (red)

Workpiece: Pet food container

Imaging with Dome Light captures reflections from the bumps on the container.

Allows for uniform imaging of the whole container by combining the Dome Light with a Coaxial Light.

High Power Dome Light HPD2 Series

NEW! HPD2-75 Series

Specifications

Series name	Model	LED color	Power consumption (max.)	Peak wavelength/Correlated color temperature (typ.)	Weight (max.)
HPD2-75 Series	HPD2-75RD	Red	17 W	635 nm	140 g
	HPD2-75SW	White	16 W	6500 K	
	HPD2-75BL	Blue	16 W	470 nm	
	HPD2-75FC	(Red/Green/Blue)	6.0 W (Red: 1.4 W / Green: 2.3 W / Blue: 2.3 W)	(622 nm / 525 nm / 470 nm)	
	HPD2-75IR860	Infrared	12 W	860 nm	
HPD2-100 Series	HPD2-100RD	Red	17 W	635 nm	160 g
	HPD2-100SW	White	23 W	6500 K	
	HPD2-100BL	Blue	23 W	470 nm	
	HPD2-100FC	(Red/Green/Blue)	11 W (Red: 2.8 W / Green: 4.1 W / Blue: 4.1 W)	(622 nm / 525 nm / 470 nm)	
	HPD2-100IR860	Infrared	23 W	860 nm	
HPD2-150 Series	HPD2-150RD	Red	27 W	635 nm	285 g
	HPD2-150SW	White	27 W	6500 K	
	HPD2-150BL	Blue	27 W	470 nm	
	HPD2-150FC	(Red/Green/Blue)	15 W (Red: 3.7W / Green: 5.5W / Blue: 5.5W)	(622 nm / 525 nm / 470 nm)	
	HPD2-150IR860	Infrared	35 W	860 nm	
HPD2-200 Series	HPD2-200RD	Red	34 W	635 nm	460 g
	HPD2-200SW	White	41 W	6500 K	
	HPD2-200BL	Blue	41 W	470 nm	
	HPD2-200FC	(Red/Green/Blue)	19 W (Red: 4.6W / Green: 6.9W / Blue: 6.9W)	(622 nm / 525 nm / 470 nm)	
	HPD2-200IR860	Infrared	46 W	860 nm	
HPD2-250 Series	HPD2-250RD	Red	45 W	635 nm	650 g
	HPD2-250SW	White	46 W	6500 K	
	HPD2-250BL	Blue	46 W	470 nm	
	HPD2-250FC	(Red/Green/Blue)	24 W (Red: 5.5W / Green: 9.1W / Blue: 9.1W)	(622 nm / 525 nm / 470 nm)	
	HPD2-250IR860	Infrared	46 W	860 nm	
HPD2-400 Series	HPD2-400RD	Red	45 W	635 nm	1,300g
	HPD2-400SW	White	46 W	6500 K	
	HPD2-400BL	Blue	46 W	470 nm	
	HPD2-400FC	(Red/Green/Blue)	30 W (Red: 7.3W / Green: 11W / Blue: 11W)	(622 nm / 525 nm / 470 nm)	
	HPD2-400IR860	Infrared	46 W	860 nm	

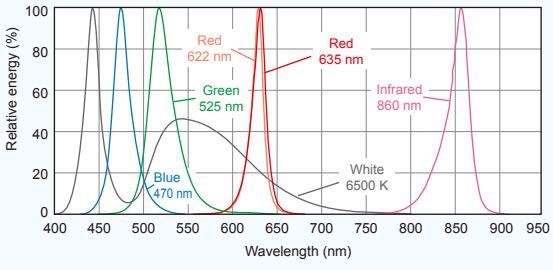
* Compared to the conventional HPR Series, the power consumption, peak wavelength, and correlated color temperature have changed. Confirm specifications and the applicable Control Unit before selecting.
* Regarding use of the full color type: The change in the radiation amount over time varies for each color (red, green, blue). Periodic adjustments may be necessary after initial radiation settings.

Common specifications

Input voltage	24 VDC
Connector	SMR-03V-B *
Polarity	1: (+), 2: NC, 3: (-)
Cable length	300 mm
Cooling method	Natural cooling
Operating environment (indoors only)	Temperature: 0 to 40°C, Humidity: 20% to 85% RH (with no condensation)
Storage environment	Temperature: -20 to 60°C, Humidity: 20% to 85% RH (with no condensation)
CE marking	Safety standard: EN62471 compliant
Environmental regulation	RoHS compliant
Case material	Aluminum alloy, Resin

* There are three connectors for the full color type.

Light spectrum



Strobe lighting through overdrive achieves high output that is approximately triple* of the constant lighting

* This is a calculated value. Results may vary for individual units.

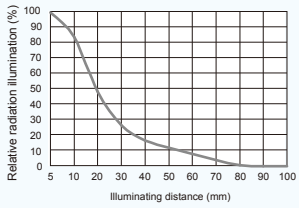
Combine with our strobe Control Unit (PTU2/BB Series) to achieve strobe lighting by overdrive.
This allows for lighting much brighter than constant lighting (the full color type is not supported).

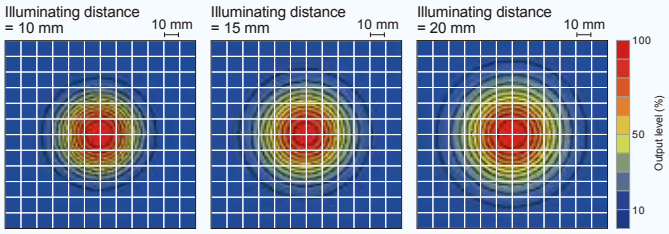
* Overdrive: The voltage or current provided to the light is increased, allowing for lighting brighter than normal.

Data: Radiation illumination graph / uniformity graph (Representative example)

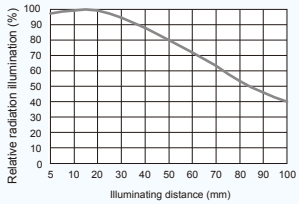
* The graphs included are for reference only. They do not guarantee the quality of this product.

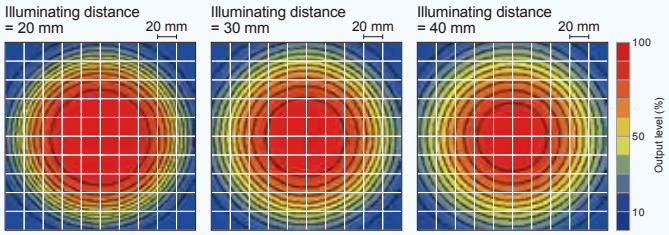
HPD2-75SW





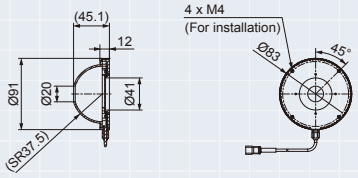
HPD2-200SW



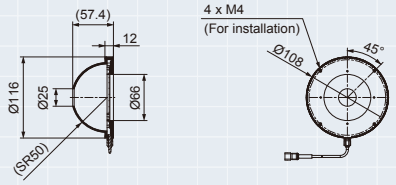


Dimensions (mm)

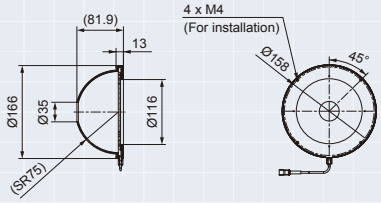
HPD2-75RD/SW/BL/FC/IR860



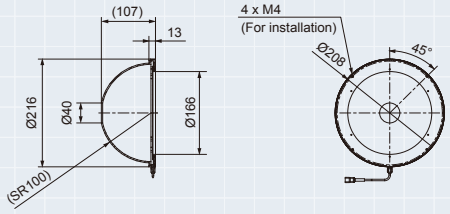
HPD2-100RD/SW/BL/FC/IR860



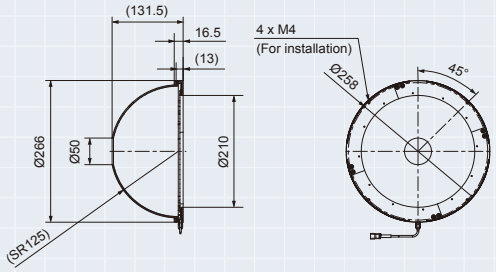
HPD2-150RD/SW/BL/FC/IR860



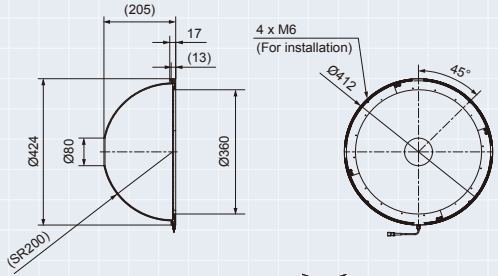
HPD2-200RD/SW/BL/FC/IR860



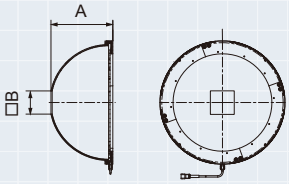
HPD2-250RD/SW/BL/FC/IR860



HPD2-400RD/SW/BL/FC/IR860



Square type dimensions



Dimensions table

Model	A dimension	B dimension
HPD2-75□-SQ20	45.1	20
HPD2-100□-SQ30	56.7	30
HPD2-150□-SQ40	81.3	40
HPD2-200□-SQ50	105.8	50
HPD2-250□-SQ60	130.3	60
HPD2-400□-SQ80	205	80

* □ is a placeholder for letters that indicate the color of the emitted light.

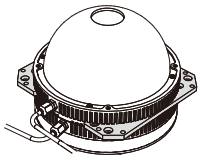
* The full color type (HPD2-□□FC) has three connectors. Use a Control Unit equipped with three channels when adjusting intensity by color.
* The full color type and our company's strobe Control Unit (PTU2/BB Series) cannot be used together.

Bracket Dimensions (mm)

Light Joint Bracket

(Includes two clamps and light installation screws)

Installation image for the HPD2-100 and HPR2-100

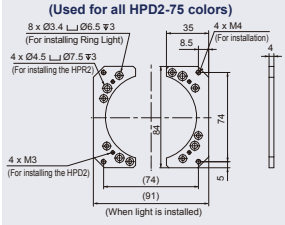


Supported Dome Lights (HPD2 Series)

Supported Ring Lights (HPR2 Series / LDR2-LA Series / LDR-LA1 Series)

BK-75-JO

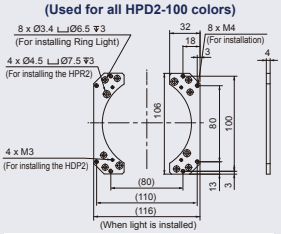
(Used for all HPD2-75 colors)



Supported Ring Lights	Used for all HPR2-75 colors Used for all LDR2-100-LA colors Used for all LDR-96-LA1 colors

BK-100-JO

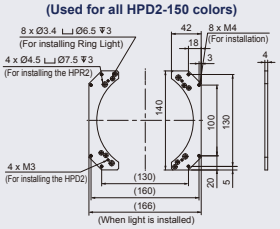
(Used for all HPD2-100 colors)



Supported Ring Lights	Used for all HPR2-100 colors Used for all LDR2-132-LA colors Used for all LDR-146-LA1 colors

BK-150-JO

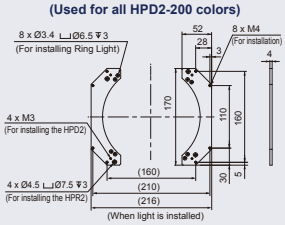
(Used for all HPD2-150 colors)



Supported Ring Lights	Used for all HPR2-150 colors Used for all LDR2-170-LA colors Used for all LDR-176-LA1 colors

BK-200-JO

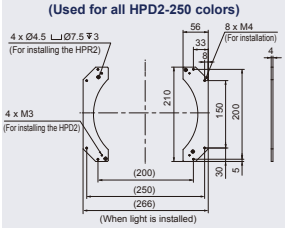
(Used for all HPD2-200 colors)



Supported Ring Lights	Used for all HPR2-200 colors Used for all LDR2-208-LA colors Used for all LDR-206-LA1 colors

BK-250-JO

(Used for all HPD2-250 colors)

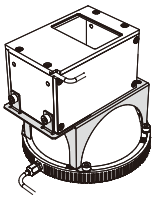


Supported Ring Lights	Used for all HPR2-250 colors

Coaxial Light Joint Bracket

(Includes one clamp and light installation screws)

Installation image for the HPD2-100 and LFV3-50

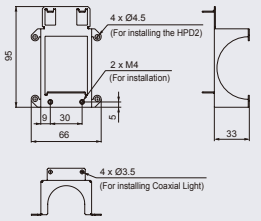


Supported Dome Lights (HPD2 Series)

Supported Coaxial Light (LFV3 Series)

BK-HPD2-75-LFV

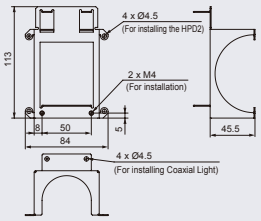
(Used for all HPD2-75 colors)



Supported Coaxial Light	Used for all LFV3-35 colors

BK-HPD2-100-LFV

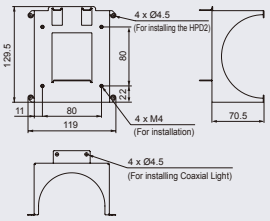
(Used for all HPD2-100 colors)



Supported Coaxial Light	Used for all LFV3-50 colors

BK-HPD2-150-LFV

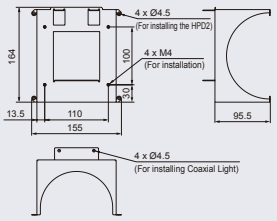
(Used for all HPD2-150 colors)



Supported Coaxial Light	Used for all LFV3-50 colors

BK-HPD2-200-LFV

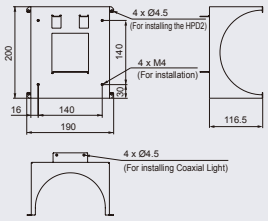
(Used for all HPD2-200 colors)



Supported Coaxial Light	Used for all LFV3-70 colors

BK-HPD2-250-LFV

(Used for all HPD2-250 colors)

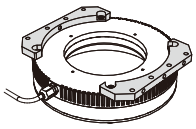


Supported Coaxial Light	Used for all LFV3-70 colors

Expansion Mounting Bracket

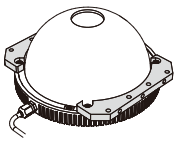
(Includes two clamps and light installation screws)

Installation image for the HPR2-100



Supported Ring Lights (HPR2 Series)

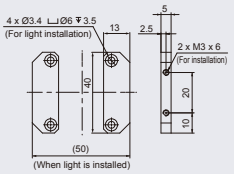
Installation image for the HPD2-100



Supported Dome Lights (HPD2 Series)

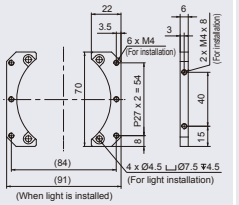
BK-50-CI

(Used for all HPR2-50 colors)



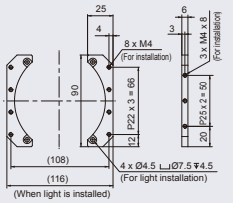
BK-75-CI

(Used for all HPR2-75 colors)
(Used for all HPD2-75 colors)



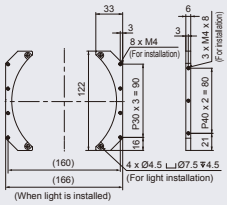
BK-100-CI

(Used for all HPR2-100 colors)
(Used for all HPD2-100 colors)



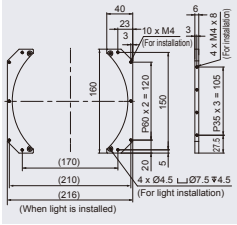
BK-150-CI

(Used for all HPR2-150 colors)
(Used for all HPD2-150 colors)



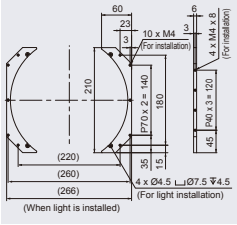
BK-200-CI

(Used for all HPR2-200 colors)
(Used for all HPD2-200 colors)



BK-250-CI

(Used for all HPR2-250 colors)
(Used for all HPD2-250 colors)



* If you would like to use the Light Joint Brackets together with the Coaxial Lihgt Joint Bracket, contact CCS.

CAUTION

- To ensure proper and safe use of the product, please read the *Instruction Guide* completely before using the product.
- The design and specifications of this product are subject to change without notification for product improvement.

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