

Instruction Guide

CE

Thank you for purchasing a CCS product. To ensure proper use of the product, please read this instruction guide before use and keep it for your future reference.

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Important Information for Equipment Safety - Read Before Use -





This product has been designed with full consideration of safety. However, incorrect usage of the product may result in fire, electric shock, or other serious damages. Please ensure to follow the conditions below.





The following symbols are used in this instruction guide to indicate and classify the relative importance of warnings and cautions.

 Warning	Indicates that incorrect usage may result in serious injury or death.	 Caution	Indicates that incorrect usage may result in injury or property damage.
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The following symbols in the instruction guide indicate and classify the precautions.

 PROHIBITED	 DISASSEMBLY PROHIBITED	 DO NOT TOUCH WITH WET HANDS	 DO NOT SUBJECT TO MOISTURE	 INSTRUCTED
These symbols mean the prohibited action.				This symbol means the necessary action must obey.

 Warning	
Do not disassemble or modify the product. Doing so may result in fire or electric shock.	 DISASSEMBLY PROHIBITED
Do not touch the product with wet hands. Doing so may result in electric shock.	 DO NOT TOUCH WITH WET HANDS
Make sure that the product is free of moisture or any liquid. Exposure to water may result in fire, electric shock.	 DO NOT SUBJECT TO MOISTURE
If abnormal condition occurs such as fuming, heat, smell, noise, or so on, stop using the product immediately, and turn off the power source. A fire or electric shock may result if the product is kept used.	

 Caution	
Do not use user-made cables. Doing so may cause product failure. Use the CCS extension cable if it is necessary to extend the distance between the light and the control unit.	 PROHIBITED
Be careful of static electricity. Damage to the LED light may occur, if a person charged with static electricity touches it. Keep the product away from all items charged with static electricity.	 PROHIBITED
Do not drop the product or subject it to impact. Doing so may cause the product to malfunction.	 PROHIBITED

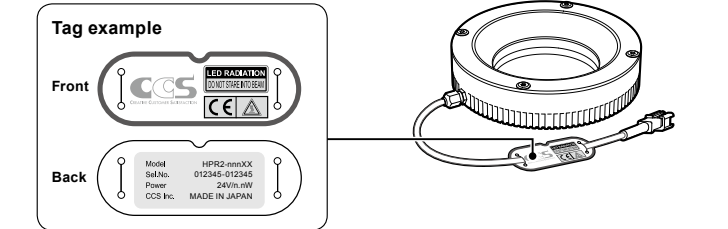
- Do not use the product in the following situations.**
- Under conditions or in an environment not described in this instruction guide.
 - In nuclear energy control systems, railroad systems, aviation systems, vehicles, combustion equipment, medical equipment, amusement machines, or safety equipment.
 - In applications involving serious risk to life or property, particularly applications demanding a high level of safety.

- Please install the product to locations with following conditions.**
Incorrect installation location may cause product failure.
- In a flat and stable location with minimal vibration.
 - Well-ventilated places with minimal dust.
 - Places that are not subject to sudden temperature changes.
 - Places free from any water, oil, liquid, chemical, or steam.
 - Places free from corrosive or combustible gas.
 - Places away from water faucets, boilers, humidifiers, air conditioners, heaters, or stoves.

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Confirming Product Information

The following tag is attached to the cable on the LED Light. The color of the label indicates the luminescence color of the Light. The back of the tag there is a name label that gives the model number, power consumption, and serial number. Be sure to check the contents before using the product and handle the label with care. If the label is missing or damaged and the contents cannot be checked, please contact CCS Inc.



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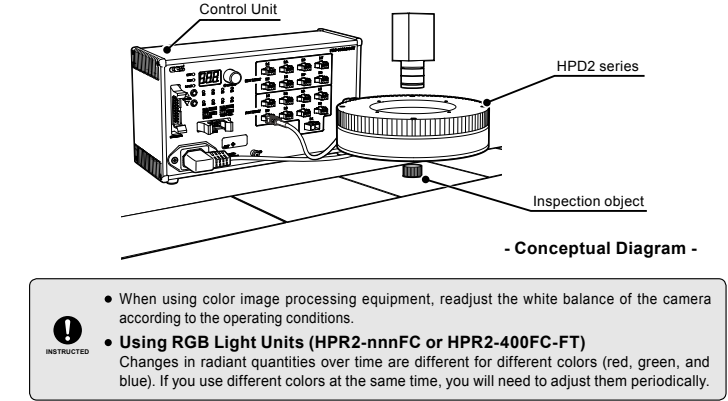
Operating Instructions

 **INSTRUCTED** Make sure that the Control Unit for the LED Light is turned off.

- 1 Connect the light cable of the product to the control unit.**
- Connect to the control unit equipped with **SMP-03V-BC** Connectors for power output. Insert the plug all the way into the connector.
- For information on applicable Control Units and cables, refer to the product catalogs or the CCS website.

- 2 Turn ON the control unit to turn ON the light.**
- Read the instruction guide of the control unit before use.

- 3 Adjust light range, light angle, and radiant quantity to optimize images.**



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Brackets (Sold Separately)

- The following Brackets are available to mount the Light Units. Obtain the required Bracket.
- 1 Expansion Mounting Bracket**
- This Bracket is used to mount Light Units on a pitch circle diameter (PCD) that is larger than the mounting hole or to mount Light Units vertically.
- 2 Light Joint Bracket**
- This Bracket is used to join an HPD2-series Dome Light Unit with an HPR2-series Light Unit. You can use it when illumination is required over an even wider range.
- The Brackets that can be used depend on the size of the Light Unit. For details, refer to the *HPD2/HPR2-series Optional Bracket Operation Guide*.

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Main Specifications

Common Specifications	
Input voltage	24V DC
Connector	SMR-03V-B*
Polarity	1:(+), 2:NC, 3:(-)
Cable length	300mm
Cooling method	Natural air-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: Conforms to EN62471
Environmental regulations	RoHS compliant
Case material	Aluminum alloy, Resin

* RGB Light Units (HPR2-nnnFC or HPR2-400FC-FT) have three connectors.

Specifications by Model (LED color)

End of model name	LED color	Peak wavelength / Correlated color temperature (typ.)
RD or RD-FT	Red	635nm
SW or SW-FT	White	6000K
BL or BL-FT	Blue	470nm

End of model name	LED color	Peak wavelength (typ.)
FC or FC-FT	Red	622nm
	Green	525nm
	Blue	470nm

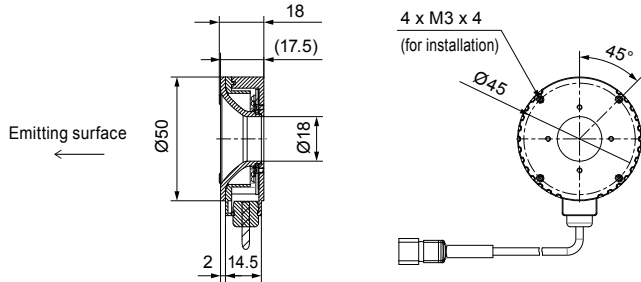
Specifications by Model

Model	Power consumption (max.)	Weight (max.)	Model	Power consumption (max.)	Weight (max.)
HPR2-50RD	7.6W	46g	HPR2-200RD	34W	380g
HPR2-50SW	9.1W		HPR2-200SW	41W	
HPR2-50BL			HPR2-200BL	19W	
HPR2-50FC	3.8W		HPR2-200FC	19W	
HPR2-75RD	17W	160g	HPR2-250RD	45W	510g
HPR2-75SW	16W		HPR2-250SW	46W	
HPR2-75BL			HPR2-250BL	24W	
HPR2-75FC	6.0W		HPR2-250FC	24W	
HPR2-100RD	17W	170g	HPR2-400RD-FT	45W	1050g
HPR2-100SW	23W		HPR2-400SW-FT	46W	
HPR2-100BL			HPR2-400BL-FT	30W	
HPR2-100FC	11W		HPR2-400FC-FT	30W	
HPR2-150RD	27W	250g			
HPR2-150SW					
HPR2-150BL					
HPR2-150FC	15W				

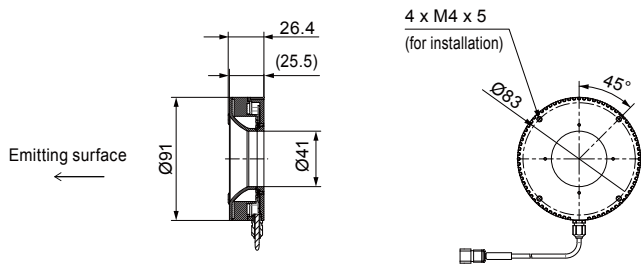
6 Dimensions (mm)

The dimensions of the side and back of the product are provided below.

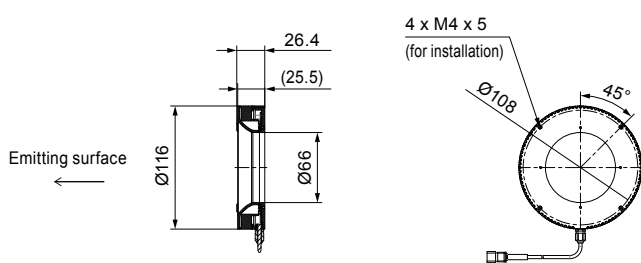
HPR2-50RD/SW/BL/FC



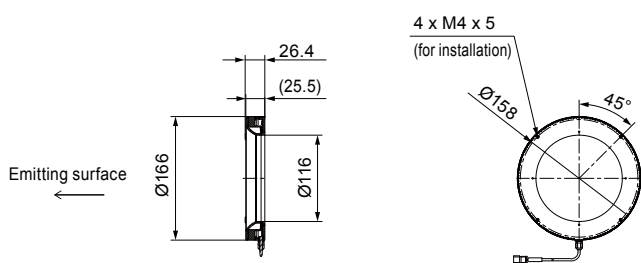
HPR2-75RD/SW/BL/FC



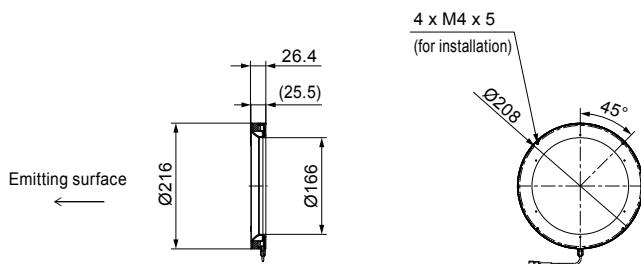
HPR2-100RD/SW/BL/FC



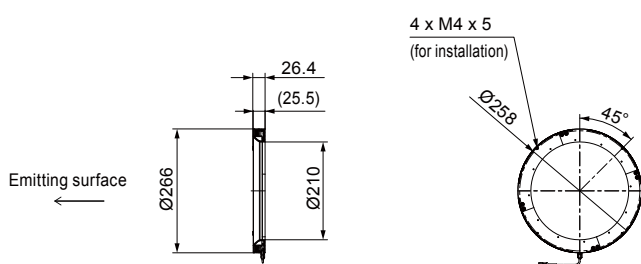
HPR2-150RD/SW/BL/FC



HPR2-200RD/SW/BL/FC



HPR2-250RD/SW/BL/FC

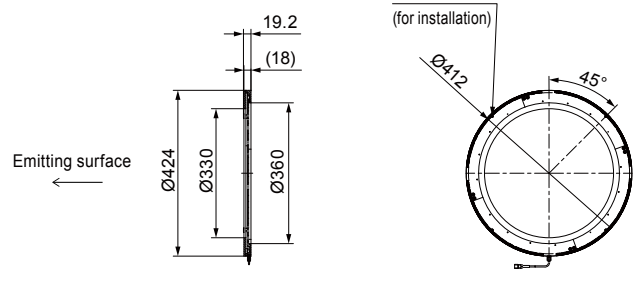


* RGB Light Units (HPR2-nnnFC or HPR2-400FC-FT) have three connectors.



* Tighten the product mounting screws to 1 N·m or less. The product may be damaged if the screws are overtightened.

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



Information Required for China RoHS Directive

Name and amount of toxic and hazardous substances or elements

Usage Deadline for Environmental Protection	Product name	Toxic or Hazardous Substances and Elements					
		Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr(VI))	PBB	PBDE
10	LED Lights	×	○	×	○	○	○

○: Indicates that this toxic or hazardous substances contained in all the homogeneous materials for this part, according to SJ/T11363-2006 is within the limit requirement.
 ×: Indicates that this toxic or hazardous substance contained in all the homogeneous materials for this part, according to SJ/T11363-2006, is over the limit requirement.
 *Lead and cadmium are excluded in EU RoHS.

Usage deadline for environmental protection
 The number used in this logo is based on "Management Methods for Controlling Pollution by Electronic Information Products" and related regulations from People's Republic of China. It shows the product usage duration in years for environmental protection. After finishing a product usage, the product needs to be re-used or discarded appropriately following local law and regulations, complying with safety and usage caution.

产品中有毒有害物质或元素的名称及含量

环保使用期限	产品	有毒有害物质或元素					
		铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
10	LED 照明	×	○	×	○	○	○

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
 ×: 表示该有毒有害物质在该部件的所有均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。
 (注) 铅和镉中的 "×", 因欧洲 RoHS 没限定, 故用 "○" 表示。

环保使用期限
 此标志的数字是根据中华人民共和国电子信息产品污染控制管理办法以及有关标准等, 表示该产品的环保使用期限的年限。
 遵守产品的安全和使用上的注意, 在产品使用后采取适当的方法根据各地法律, 规定, 回收再利用或进行废弃处理。

Warranty Information

EXCEPT FOR THE EXPRESS WARRANTIES STATED IN THIS DOCUMENT, CCS MAKES NO ADDITIONAL WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, AS TO ANY MATTER WHATSOEVER. IN PARTICULAR, ANY AND ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. EXCEPT AS EXPRESSLY SET FORTH HEREIN, CCS MAKES NO WARRANTIES WITH RESPECT TO THE PRODUCTS.

WARRANTY PERIOD: TWO YEARS (ONE YEAR FOR RADIANT QUANTITY), STARTING FROM CCS Inc. SHIPPING DATE.

CCS Inc. WILL REPAIR OR REPLACE THE PRODUCT FREE OF CHARGE IF IT SHOULD FAIL TO FUNCTION OR IF THE RADIANT QUANTITY OF THE PRODUCT SHOULD DROP TO 50% OR LESS OF ITS INITIAL RADIANT QUANTITY WITHIN THE SPECIFIED WARRANTY PERIOD. IF EITHER OF THESE CONDITIONS OCCURS, PLEASE TAKE THE PRODUCT TO YOUR CCS SALES REPRESENTATIVE.

WARRANTY TERMS

- CCS Inc. WILL REPAIR OR REPLACE THE PRODUCT FREE OF CHARGE IF IT SHOULD FAIL TO FUNCTION UNDER USE ON OUR SPECIFIED CONDITION IN ACCORDANCE WITH THE INSTRUCTION GUIDE AND OTHER WRITTEN CAUTIONS DURING THE INDICATED WARRANTY PERIOD OF TWO YEARS.
- CCS Inc. WILL REPAIR OR REPLACE THE PRODUCT FREE OF CHARGE IF ITS RADIANT QUANTITY SHOULD DROP TO 50% OR LESS OF ITS INITIAL RADIANT QUANTITY UNDER USE ON OUR SPECIFIED CONDITION IN ACCORDANCE WITH THE INSTRUCTION GUIDE AND OTHER WRITTEN CAUTIONS DURING THE INDICATED WARRANTY PERIOD OF ONE YEAR.
- CCS Inc. WILL CHARGE A REPAIR FEE UNDER THE FOLLOWING CONDITIONS:
 - IF THE PRODUCT HAS BEEN SUBJECTED TO MISUSE, UNAUTHORIZED REPAIRS, OR MODIFICATION FROM ITS ORIGINAL DESIGN.
 - IF THE PRODUCT HAS BEEN DAMAGED FROM IMPACTS DUE TO INAPPROPRIATE HANDLING.
 - IF DAMAGE TO THE PRODUCT RESULTS FROM EXTERNAL CAUSES INCLUDING ACCIDENTS, FIRE, POLLUTION, RIOTS, COMMUNICATION FAILURES, EARTHQUAKES, THUNDERSTORMS, WIND AND FLOOD DAMAGE, OR ANY OTHER ACT OF PROVIDENCE, OR FROM ANY EXTRAORDINARY CONDITIONS SUCH AS ELECTRICAL SURGES, WATER LEAKAGE, CONDENSATION, OR THE USE OF CHEMICALS.
 - IF THE DAMAGE RESULTS FROM CONNECTION TO ANY CONTROL UNIT OR TO ANY EQUIPMENT WHICH CCS Inc. DOES NOT MANUFACTURE OR DOES NOT SPECIFY FOR USE.
- CCS ASSUMES NO LIABILITY FOR ANY PURCHASER'S SECONDARY DAMAGE (DAMAGE OF EQUIPMENT, LOSS OF OPPORTUNITIES, LOSS OF PROFITS, ETC.) OR ANY OTHER DAMAGE RESULTING FROM A FAILURE OF OUR PRODUCT.

THIS WARRANTY INFORMATION PROVIDES THE SCOPE OF CCS'S PRODUCT WARRANTY WITHIN THE SPECIFIED PERIOD, AND DOES NOT INDICATE OR IMPLY ANY FURTHER GUARANTEE BEYOND THE WARRANTY TERMS.

CONTACT CCS FOR INQUIRIES OR INFORMATION ON REPAIRS TO THE PRODUCT AFTER THE EXPIRATION OF THE WARRANTY.

NOTE: THE RADIANT QUANTITY REFERS TO THE WATTAGE OF PHYSICAL ENERGY RADIATED FROM AN LED. IT REFERS TO THE RADIATION LUMINOSITY OF THE LED MEASURED UNDER CONDITIONS SPECIFIED BY CCS OR THE RADIATION ILLUMINATION OF THE LED UNDER SPECIFIED IRRADIATION CONDITIONS. CCS SPECIFIES THE RADIANT QUANTITY FOR EACH LED LIGHT BECAUSE THE MEASUREMENT AND IRRADIATION CONDITIONS VARY FROM THE FORM, THE APPLICATION AND THE IRRADIATION WAVELENGTH.

- Contents of this Instruction Guide may be changed without prior notice.
- Illustrations used in this Instruction Guide may differ from actual products.
- CCS maintains the copyright on this Instruction Guide. Unauthorized transfer or reproduction is strictly prohibited.

- For information on compliance with product standards and environmental regulations, refer to the CCS website or to product catalogs.
- Instruction Guide and Dimensional Diagrams in PDF or CAD can be downloaded from the CCS website. <http://www.ccs-grp.com/>

Ask any product queries to the following address or to your nearest CCS representative.

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Use our website to find your nearest CCS representative. <http://www.ccs-grp.com/mvad/>