

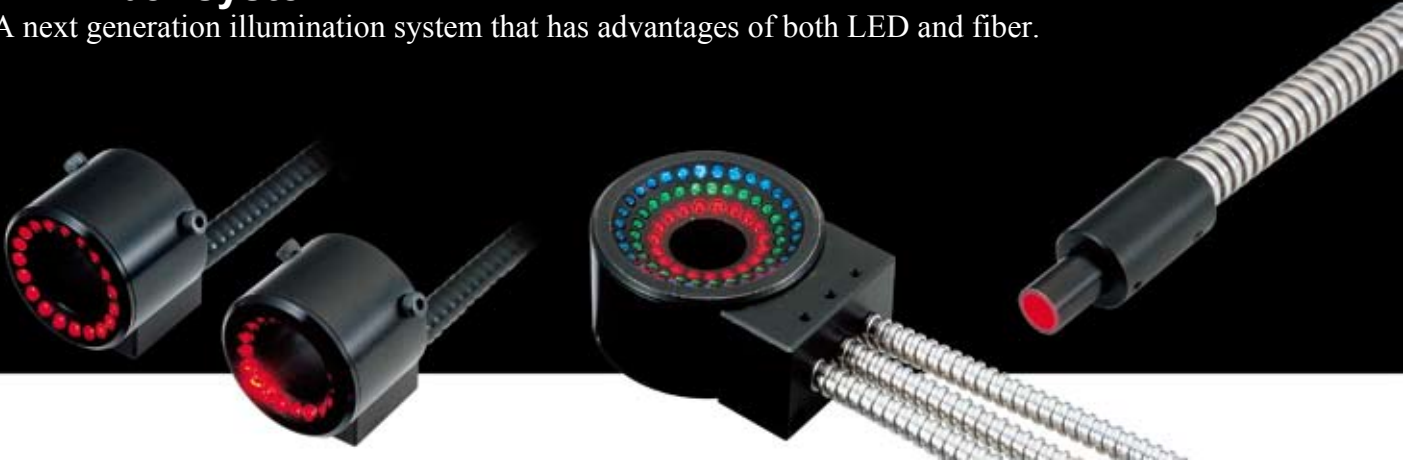


# Micro Fiber-heads

## HFS/HFR Series

### LED fiber system

A next generation illumination system that has advantages of both LED and fiber.



#### Our original light focusing technology reaches unprecedented brightness

While halogen fiber lighting illuminates a wide area, the HFR Series using original-condensing techniques provides high intensity by illuminating only a required field of view.

Selectable in the lineup according to the work sample character is tics.

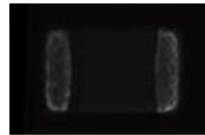
 <p><b>HFR-25-10</b></p>			<p>High-condensed illumination by Ø5 from 10mm LWD (high-condensed illuminating by single array)</p>
 <p><b>HFR-25-30</b></p>			<p>Condensed illumination from 30mm LWD (condensed by single array)</p>
 <p><b>HFR-40-20</b></p>			<p>High-condensed illumination by wide-view of Ø10 from 20mm LWD (condensed by three independent arrays)</p>

LWD: Light Working Distance (Distance from a light to an object)

#### Clear images can be captured by selecting illumination range, illumination angle and luminosity

##### Actual images of chip part

100W Halogen light + Ø20Ring light guide

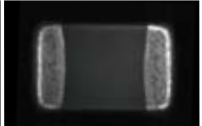
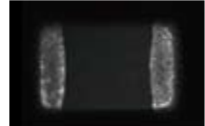


The ring type HFR Series offers a wide variety of products so that you can choose the irradiation range, illumination angle, and luminance most suitable for the objects to be inspected and the environment.

HFR-25-30 (Blue)

HFR-25-10 (Blue)

HFR-40-20 (Blue)



Operating conditions:  
Shutter speed: 500µsec (1/20,000 sec.) Lens: Double magnification  
Light intensity: 100% Light used: HLV2-22BL-NR-3W

#### Detecting a small part that is difficult to capture with an existing halogen light source can be achieved with high contrast

##### Image comparison of alignment of TAB tape

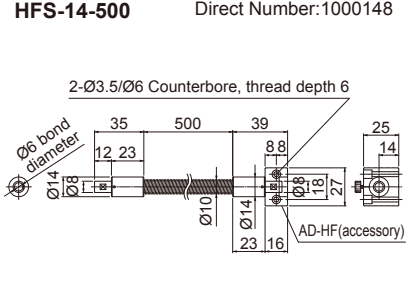
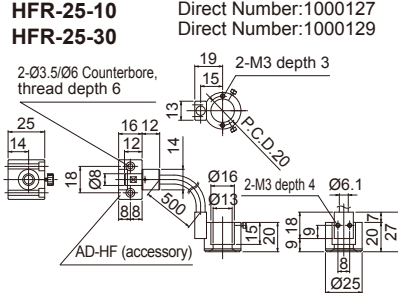
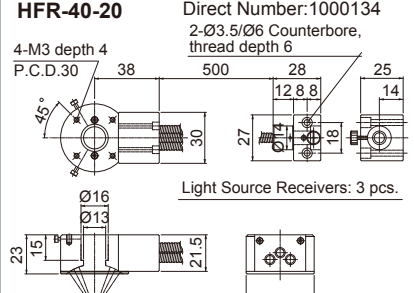
100W Halogen light + Ring light guide



HFR-25-30 (Blue) LWD 30mm



### Dimension Diagrams (Unit: mm)

<p><b>HFS-14-500</b> Direct Number:1000148</p>  <p>2-Ø3.5/Ø6 Counterbore, thread depth 6</p> <p>Ø6 bond diameter</p> <p>AD-HF (accessory)</p>	<p><b>HFR-25-10</b> Direct Number:1000127 <b>HFR-25-30</b> Direct Number:1000129</p>  <p>2-Ø3.5/Ø6 Counterbore, thread depth 6</p> <p>2-M3 depth 3</p> <p>P.C.D.20</p> <p>AD-HF (accessory)</p>	<p><b>HFR-40-20</b> Direct Number:1000134</p>  <p>2-Ø3.5/Ø6 Counterbore, thread depth 6</p> <p>4-M3 depth 4</p> <p>P.C.D.30</p> <p>Light Source Receivers: 3 pcs.</p>
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# Light Sources for Micro Fiber-heads

## HLV2-22-NR-3W Series

**Allow users to choose the illumination color and intensity**  
 Micro Fiber-head combination ensures compatibility with a wide array of applications.



**By changing the light source color, features can be clearly extracted according to the application purpose**

Red (RD), green (GR), blue (BL), and white (SW) light sources are available for near monochromatic LED lighting that can be matched to the spectral characteristics of the target object. Combination with a Micro Fiber-head allows the user to tailor the best illumination color and lighting configuration to extract the most accurate image.

Straight type HFS-14-500



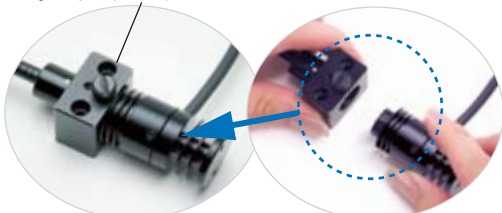
Ring type HFR-25-10/ HFR-25-30



**Change color with ease**

HLV2-22-NR-3W Series for Micro-Fiber-heads are easily attached and detached.

Connecting Adaptor (AD-HF) is included with the HFS/HFR Series



Please use with a connecting adaptor, AD-HF

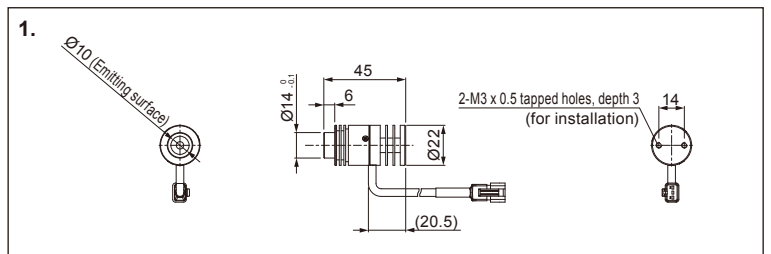
**Direct Number :** You can easily access the web page providing information on any desired product by simply entering the 7-digit direct number in the space provided. (Refer to the back cover of this brochure.)

### Product Lineup Table

Series	Direct Number	Model Name	Color	Power Consumption	Option	Dimension
HLV2-22-NR-3W	1004520	HLV2-22RD-NR-3W	●	2.8W	—	1
	1004521	HLV2-22SW-NR-3W	○			
	1004522	HLV2-22BL-NR-3W	●			
	1004523	HLV2-22GR-NR-3W	●			

Please use CC-PJ-0707 or PJ Series control unit for HLV2 Spotlights.  
 Refer to pages 87 and 88 for details on Control Units for Spotlight Units.

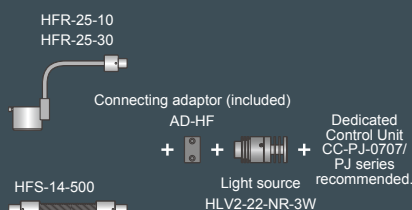
### Dimension Diagrams (Unit: mm)



Refer to pages 87 and 88 for details on Control Units for HLV2 Spotlights.

### Application Example of HLV2-22-NR-3W

Micro Fiber-head combination ensures compatibility with a wide array of applications



### Optional Extension Cable

#### Standard models

FCB-1/-2/-3/-5  
 (1m/2m/3m/5m)

\*Refer to Page 94.

#### Models with robot cables

FRCB-1/-2/-3/-5  
 (1m/2m/3m/5m)

\*Refer to Page 94.

#### Using an Extension Cable

Do not connect longer than 5 m of Extension Cables.

\*If you need to use an Extension Cable longer than 5 m, please contact a CCS sales representative.

Branch cables cannot be used.