

## Product Introduction



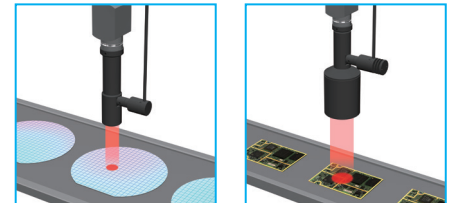
CCS Inc., the leading manufacture of LED lighting for Machine Vision, has launched its new HL3 Cylindrical Type Series spot lights as the direct successor of the HL2 Units. The new HL3-C Series uses the latest in LED technology, guaranteeing high intensity and high uniformity, and was designed with the use of our latest high-resolution telecentric lenses in mind. The series is also compatible with our complete range of condenser lenses, which allows for an increase in parallel light output or focusing the irradiation for increase intensity.

The new HL3-C Series has the same housing as the HL2 Series, making it easy for the user to replace in their existing machine vision applications. It also adds the 4W type to this cylindrical form factor, first introduced in the HL3 Series.

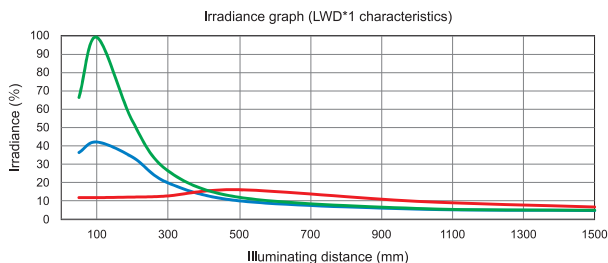
The combination of high perform spot lights with high-resolution telecentric lenses or condenser lenses make this new product series ideal for use in wafer inspection or PCB inspection when working with a very small field of view.

## Main Features

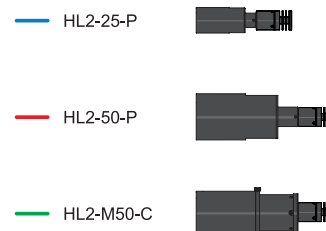
- Direct replacement for HL2 Series
- Optimized for high-resolution telecentric lenses
- Ideal when used with high-performing parallel and condenser lenses
- Key applications include PCB inspection and wafer inspection



## Condenser Lens Irradiance Comparison

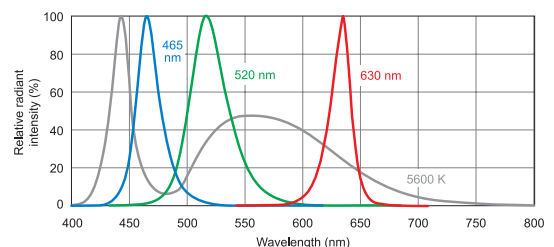


\*1 Irradiation distance from lighting to workpiece.  
Measured with HL3-225W-4S (white), which has the same optical system as HL3-225W-4C (white). Comparison using our measurement conditions.  
The data included is for reference only and the results for individual products may vary.



## Common Specifications

Color of LED	Red (630nm), White (5600K), Blue (465nm), Green (520nm)
Connector	SMR-03V-B
Polarity	1: Signal, 2: (+), 3: (-)
Operating env. (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
Cable material	Aluminum alloy



# Product Lineup

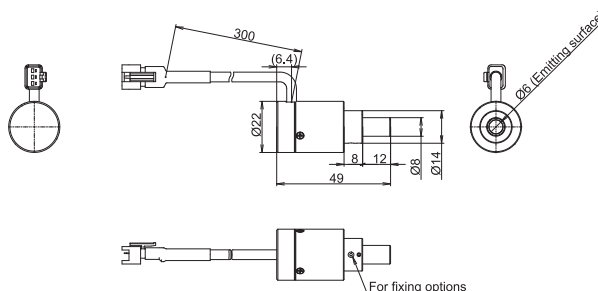
Model name*1	Input current (max.)	Power Consumption (max.)				Options	Extension cables	Recommended Control Units	Weight (max.)
		RD (red)	SW (white)	BL (blue)	GR (green)				
HLV3-22□□-1C	385 mA	1.1 W	1.3 W	1.4 W	1.4 W	Condenser Lens	FCB*3 Straight Cable	PD3*2	34 g
HLV3-22□□-2C	700 mA	2.0 W	2.4 W	2.6 W	2.7 W			CC-PJ-0707	
HLV3-22□□-2C-1220	700 mA	2.0 W	2.4 W	2.6 W	2.7 W	—	FRCB Robot Cable	PJ	40 g
								PJ2*2	
HLV3-22□□-4C	1000 mA	3.0 W	3.5 W	3.8 W	4.0 W	Condenser Lens	FCB*3 Straight Cable FRCB Robot Cable FCB-HLV3-10 Straight Cable FRCB-HLV3-10 Robot Cable	PJ2*2	39 g

\*1 □□ in the model name indicates the LED emission color. RD: Red, SW: White, BL: Blue, GR: Green

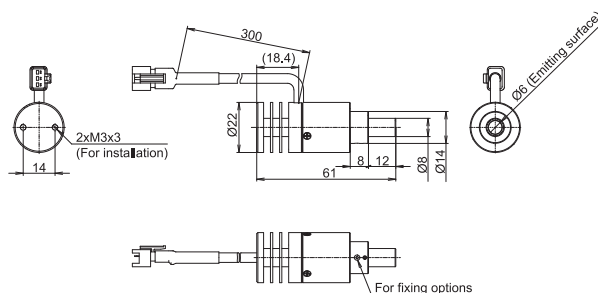
\*2 The PD3-3024-3 and PD3-5024-3 series are not applicable to these products. \*3 The cables with a model name that ends with "-PF", "-PF-EL9", "-ME7", or "-EL2" are not included.

## Product Drawings

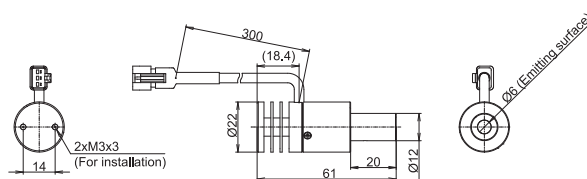
### Standard Model HLV3-22-1C



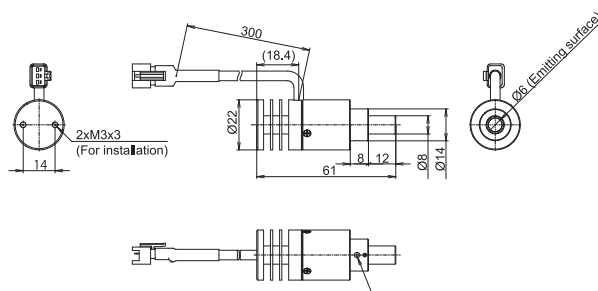
### Standard Model HLV3-22-2C



### Ø12-mm Light Emitting Tip HLV3-22-2C-1220



### High Output Models HLV3-22-4C



For further information, please contact your local CCS representative  
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