
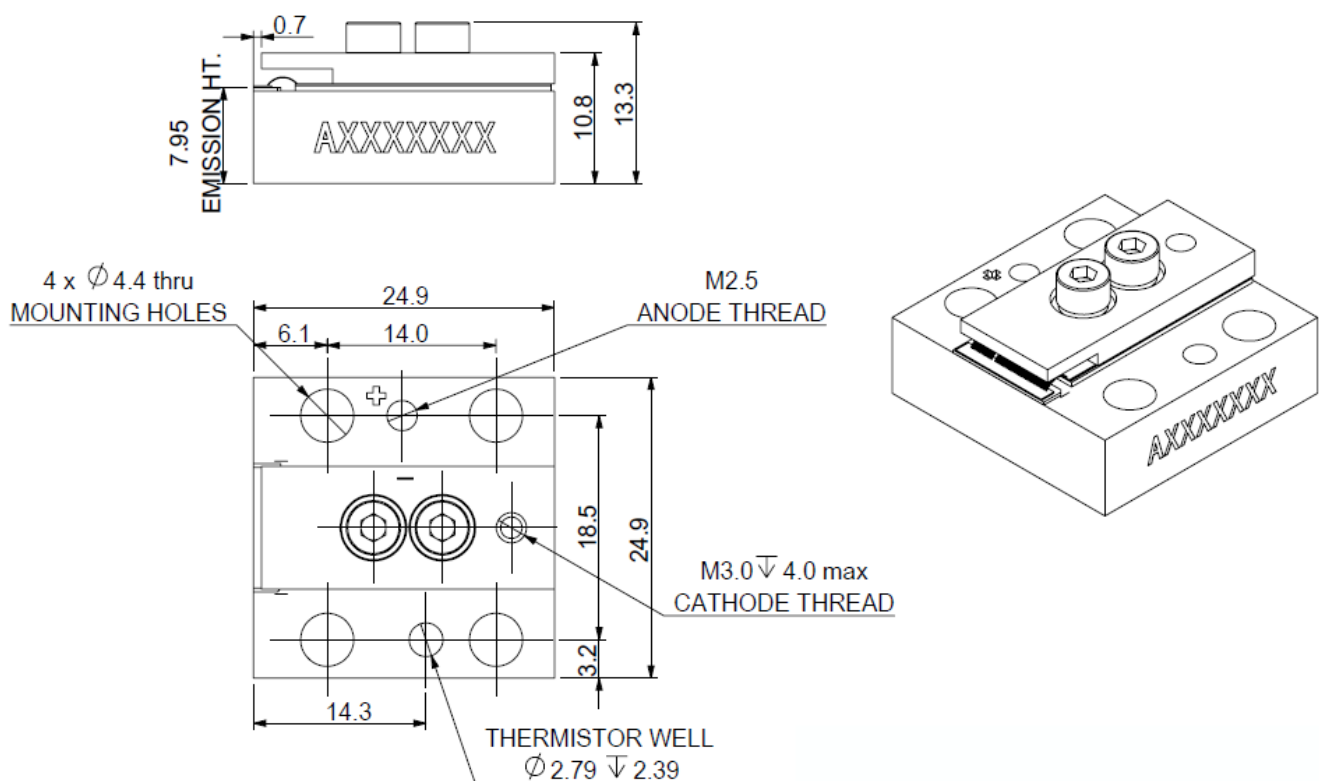


# Macro-channel Water Cooled Horizontal Array (CW)

## HCS02

	<p><b>Features</b></p> <ul style="list-style-type: none"> <li>• AuSn bonding</li> <li>• Low smile</li> <li>• Harsh environment use</li> </ul>	<p><b>Applications</b></p> <ul style="list-style-type: none"> <li>• Pumping</li> <li>• Industry</li> <li>• Printing</li> <li>• Medical</li> <li>• Scientific research</li> </ul>
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### Product Dimensions (mm)



**Remark:** The structure drawing is for reference only. Please feel free to contact us for any special requirements.

## Product Specifications

Product Code	OPD000059	OPD000062	OPD000064	OPD000056
Part No. <sup>1</sup>	FL-HCS02-60-808	FL-HCS02-80-940	FL-HCS02-80-976	FL-HCS02-60-1060

Optical Data <sup>2</sup>	Unit	Value			
Centroid Wavelength	nm	808	940	976	1060
Wavelength Tolerance	nm	± 3	± 5	± 5	± 15
Output Power <sup>3</sup>	W	60	80	80	60
Emitter Size	µm	100	100	100	200
Fill Factor	%	20	20	20	50
Spectral Width FWHM	nm	≤ 4	≤ 4.5	≤ 4.5	/
Spectral Width 90% Energy	nm	≤ 6	≤ 8	≤ 8	/
Fast Axis Divergence (FWHM)	°	~ 35	~ 40	~ 40	~ 40
Slow Axis Divergence (FWHM)	°	~ 8	~ 8	~ 8	~ 8
Polarization Mode	-	TE	TE	TE	TE
Wavelength Temp. Coefficient	nm / °C	~ 0.28	~ 0.33	~ 0.34	~ 0.4

Electrical Data <sup>2</sup>					
Operation Current	A	≤ 70	≤ 90	≤ 90	≤ 75
Threshold Current	A	≤ 10	≤ 12	≤ 12	≤ 12
Operating Voltage/Bar	V	≤ 2	≤ 2	≤ 2	≤ 2
Slope Efficiency/Bar	W / A	≥ 1	≥ 1.1	≥ 1.1	≥ 0.9
Power Conversion Efficiency	%	≥ 50	≥ 50	≥ 50	≥ 50

Thermal Data					
Operating Temperature	°C	15 ~ 35	15 ~ 35	15 ~ 35	15 ~ 35
Storage Temperature <sup>4</sup>	°C	-40 ~ 55	-40 ~ 55	-40 ~ 55	-40 ~ 55
Recommended Heatsink Capacity	W	≥ 120	≥ 160	≥ 160	≥ 120

Product Code	OPD000060	OPD000063	OPD000066	OPD000057
Part No. <sup>1</sup>	FL-HCS02-60-808-Y	FL-HCS02-80-940-Y	FL-HCS02-80-976-Y	FL-HCS02-60-1060-Y

Optical Data <sup>2</sup>	Unit	Value			
Fast Axis Divergence (FWHM)	°	< 0.5	< 0.5	< 0.5	< 0.5

All other specifications same as above.

<sup>1</sup> Part No. = Brand Code - Series - Power - Centroid Wavelength (- Collimation).

<sup>2</sup> Data at 25°C temperature, unless otherwise stated.

<sup>3</sup> Lifetime reduced if overused under nominal operating condition.

<sup>4</sup> A non-condensing environment is required for storage and operation below ambient dew point.

