

940nm, Macro-Channel, Conduction-Cooled, QCW, Vertical Diode Laser Stack

Features

- Low vertical height
- Compact and planar design
- Center hole for module alignment
- High environmental temperature range
- High output power bar



Device Specification

Optical Parameters ¹		Units
Center Wavelength Range ³	nm	940
Center Wavelength Tolerance	nm	±5
Output Power per Bar ^{2, 5}	W	<175
Number of Bars ³	#	8
Bar-to-Bar Spacing ³	mm	1.7
Spectral Width (FWHM) ⁵	nm	<6
Slope Efficiency per Bar	W/A	>1.2
Fast-Axis Divergence without Optics	degree	60
Fast-Axis Divergence with Fast-Axis Collimation	mrad	<8
Slow-Axis Divergence	degree	<12
Wavelength Temperature Coefficient	nm/°C	0.3

Electrical Parameters ¹		
Power Conversion Efficiency	%	>50
Threshold Current (I_{TH})	A	<22
Operating Current (I_{OP})	A	<220
Operating Voltage per Bar (V_{OP})	V	<2
High Duty Cycle	%	Up to 20

Thermal Parameters		
Operating Temperature Range ^{3,4}	°C	+20 to +35
Storage Temperature Range ⁴	°C	0 to +55
Recommended Coolant Flow Rate	l/h	60
Recommended Coolant Temperature	°C	20

¹Data at 20°C cold water temperature.

²Reduced lifetime if used above nominal operating conditions.

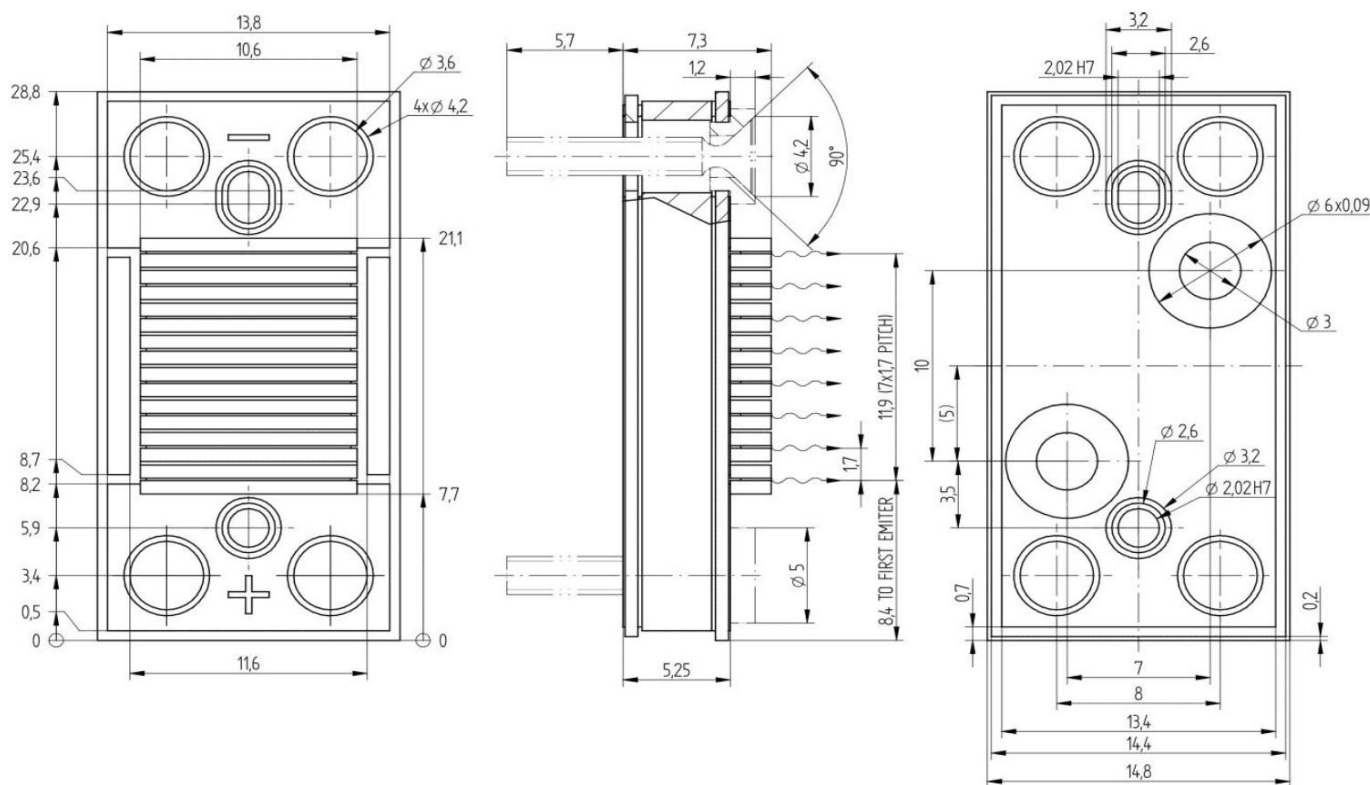
³Custom configurations on request.

⁴A non-condensing environment is required for storage and operation below the ambient dew point.

⁵QCW, <2% Duty Cycle, <500μ sec at 808nm.

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Package Dimension

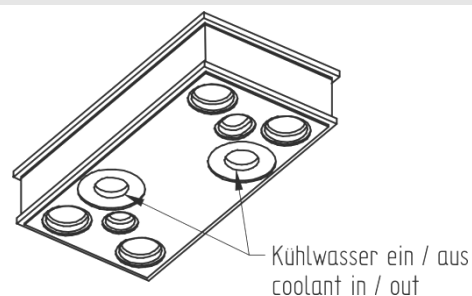


Coolant Connection

Coolant manifold is assembled at the customer site.

Refer to dimensional drawing.

Regard O-ring pressing rate of 30% for tight connection of cooling circuit. Regard position of aligning pins to fit correct position of O-ring for tight assembly.



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