

9xxnm, Conduction-Cooled, QCW, Fast-Axis Collimated Vertical Diode Laser Stack

Features

- With fast axis collimation (<8 mrad)
- Low vertical height
- Compact size
- High collimation efficiency



Device Specification

Optical Parameters ¹	Units	QCW		
Center Wavelength Range ³	nm		9xx	
Center Wavelength Tolerance	nm	±3	±3	±3
Output Power per Bar ^{2, 5}	W	100	150	300
Number of Bars ³	#	up to 20	up to 20	up to 20
Bar-to-Bar Spacing ³	mm	1.6	1.6	1.6
Spectral Width (FWHM)	nm	<5	<5	<5
Slope Efficiency per Bar	W/A	>1.00	>1.00	>1.10
Fast-Axis Divergence with Fast-Axis Collimation	mrad	<8	<8	<8
Slow-Axis Divergence	degree	<10	<10	<10
Wavelength Temp. Coefficient	nm/°C	0.31-0.38	0.31-0.38	0.31-0.38

Electrical Parameters^{1, 5}

Power Conversion Efficiency	%	>50	>50	>55
Threshold Current (I_{TH})	A	<15	<15	<22
Operating Current (I_{OP})	A	<120	<170	<300
Operating Voltage per Bar (V_{OP})	V	<2	<2	<2

Thermal Parameters

Operating Temperature Range ^{3,4}	°C	+20 to +45	+20 to +45	+20 to +45
Storage Temperature Range ⁴	°C	0 to +55	0 to +55	0 to +55
Recommended Heatsink Capacity per Bar	W	>20	>20	>30

¹Data at 20°C cold plate temperature.

²Reduced lifetime if used above nominal operating conditions.

³Others available upon request.

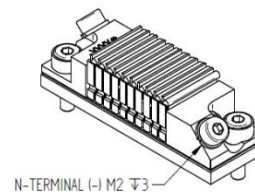
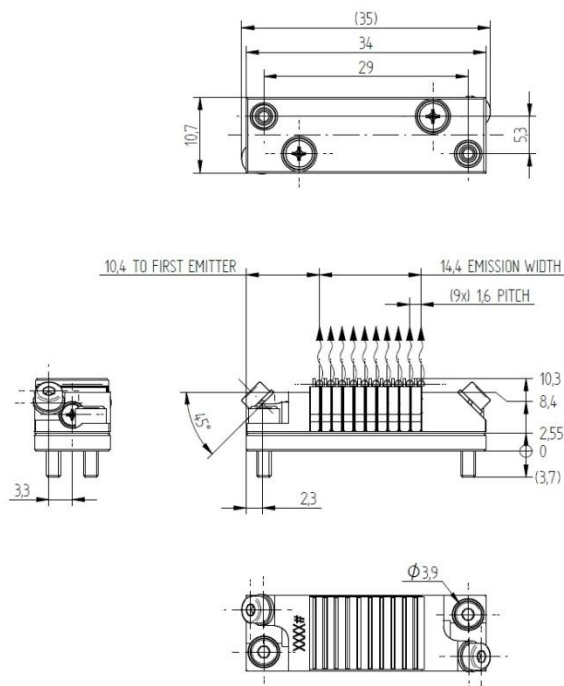
⁴A non-condensing environment is required for storage and operation below the ambient dew point.

⁵QCW, <2% Duty Cycle, <500µsec.

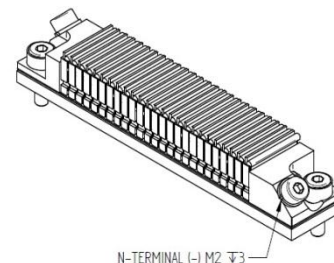
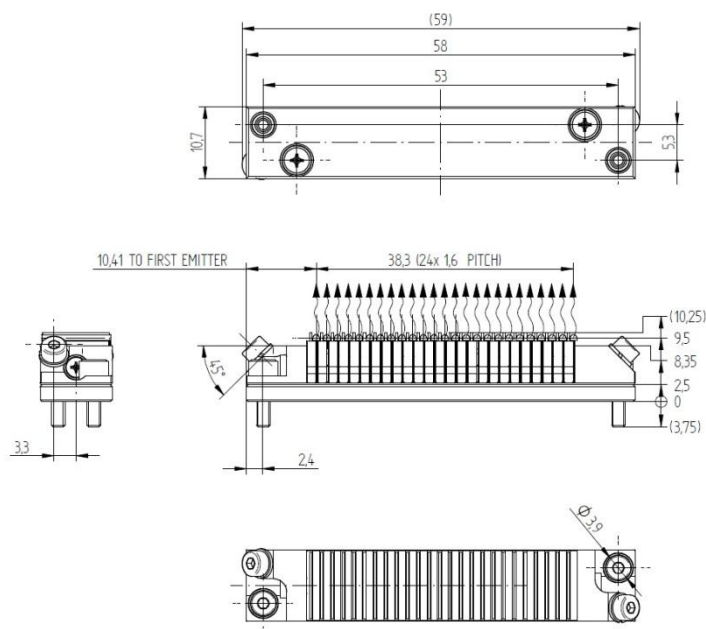
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Package Dimension

Back-plane cooled QCW Vertical Diode Laser Stack with 1x10 diode lasers.



Back-plane cooled QCW Vertical Diode Laser Stack with 1x25 diode lasers.



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