

# Fast Axis Collimated Conduction Cooled QCW Vertical Diode Laser Stack

## Features

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



## Device Specification

Optical Parameters <sup>1</sup>	Units	QCW	QCW	QCW	QCW	QCW
Center Wavelength Range <sup>3</sup>	nm	808	808	915	940	940
Center Wavelength Tolerance	nm	±3	±3	±3	±3	±3
Output Power per Bar <sup>2, 5</sup>	W	100	150	100	100	150
Number of Bars <sup>3</sup>	#	up to 20	up to 20	up to 20	up to 20	up to 20
Bar-to-Bar Spacing <sup>3</sup>	mm	1.6	1.6	1.6	1.6	1.6
Spectral Width (FWHM)	nm	5	5	5	5	5
Slope Efficiency per Bar	W/A	>1	>1	>1	>1	>1
Fast Axis Divergence with fast axis collimation	mrad	<8	<8	<8	<8	<8
Slow Axis Divergence	degree	12	12	10	10	10
Wavelength Temp. Coefficient	nm/°C	0.27	0.27	0.31	0.31	0.31
Electrical Parameters <sup>1</sup>						
Power Conversion Efficiency	%	>50	>45	>50	>50	>50
Threshold Current (I <sub>TH</sub> )	A	<15	<22	<15	<15	<22
Operating Current (I <sub>OP</sub> )	A	<120	<170	<120	<120	<170
Operating Voltage per Bar (V <sub>OP</sub> )	V	<2	<2	<2	<2	<2
Thermal Parameters						
Operating Temperature Range <sup>3, 4</sup>	°C			+20 to 35		
Storage Temperature Range <sup>4</sup>	°C			0 to +55		
Recommended Heatsink Capacity per Bar	W			≥70		

<sup>1</sup>Data at 20°C cold plate temperature.

<sup>2</sup>Reduced lifetime if used above nominal operating conditions.

<sup>3</sup>Others available upon request.

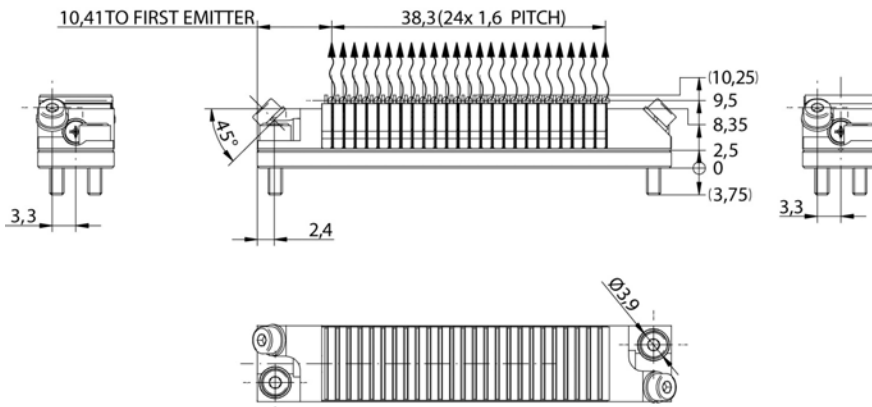
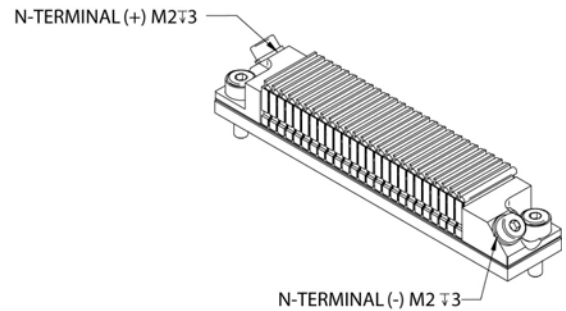
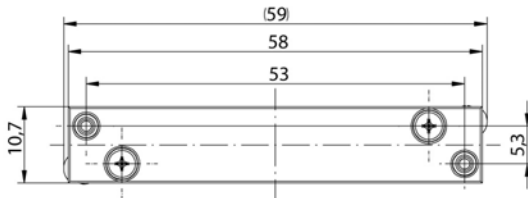
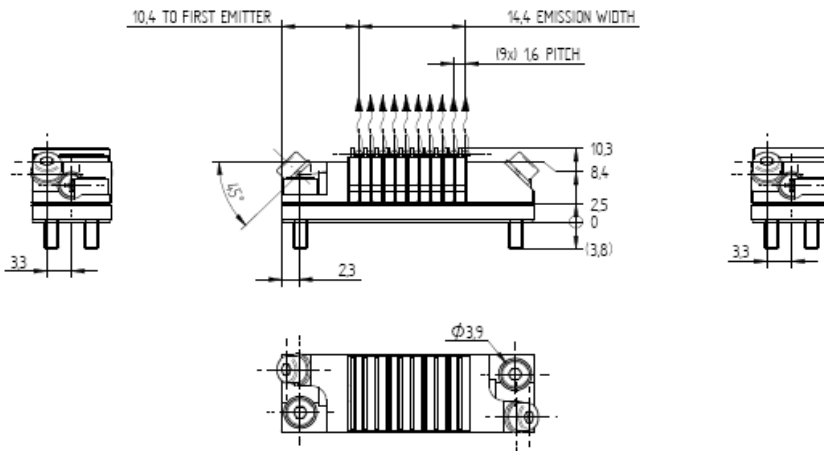
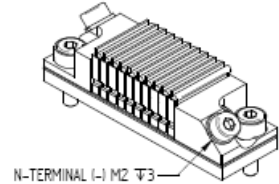
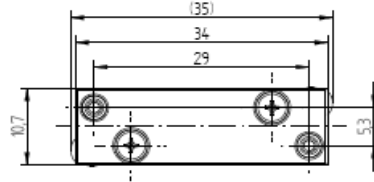
<sup>4</sup>A non-condensing environment is required for storage and operation below the ambient dew point.

<sup>5</sup>QCW, <2% Duty Cycle, <500µsec.

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## Package Dimension

Examples of back-plane cooled Fast Axis Collimated QCW Vertical Diode Laser Stack with 1x10 and 1x25 diode lasers, consult DILAS for other package dimensions.



DILAS products specifications are subject to change without notice. For handling precautions, please reference the general handling instruction manual.

For complete details, please contact your local DILAS sales representative or visit our website at [www.DILAS.com](http://www.DILAS.com).

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