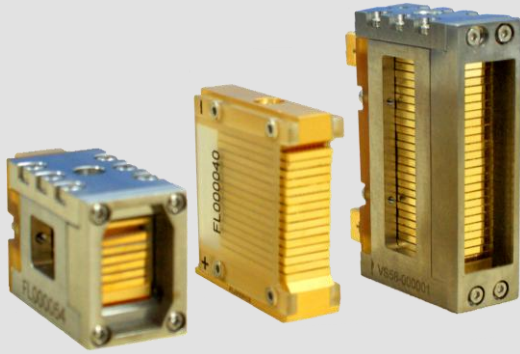


# Micro-Channel Water Cooled Vertical Stack Diode Laser (QCW)



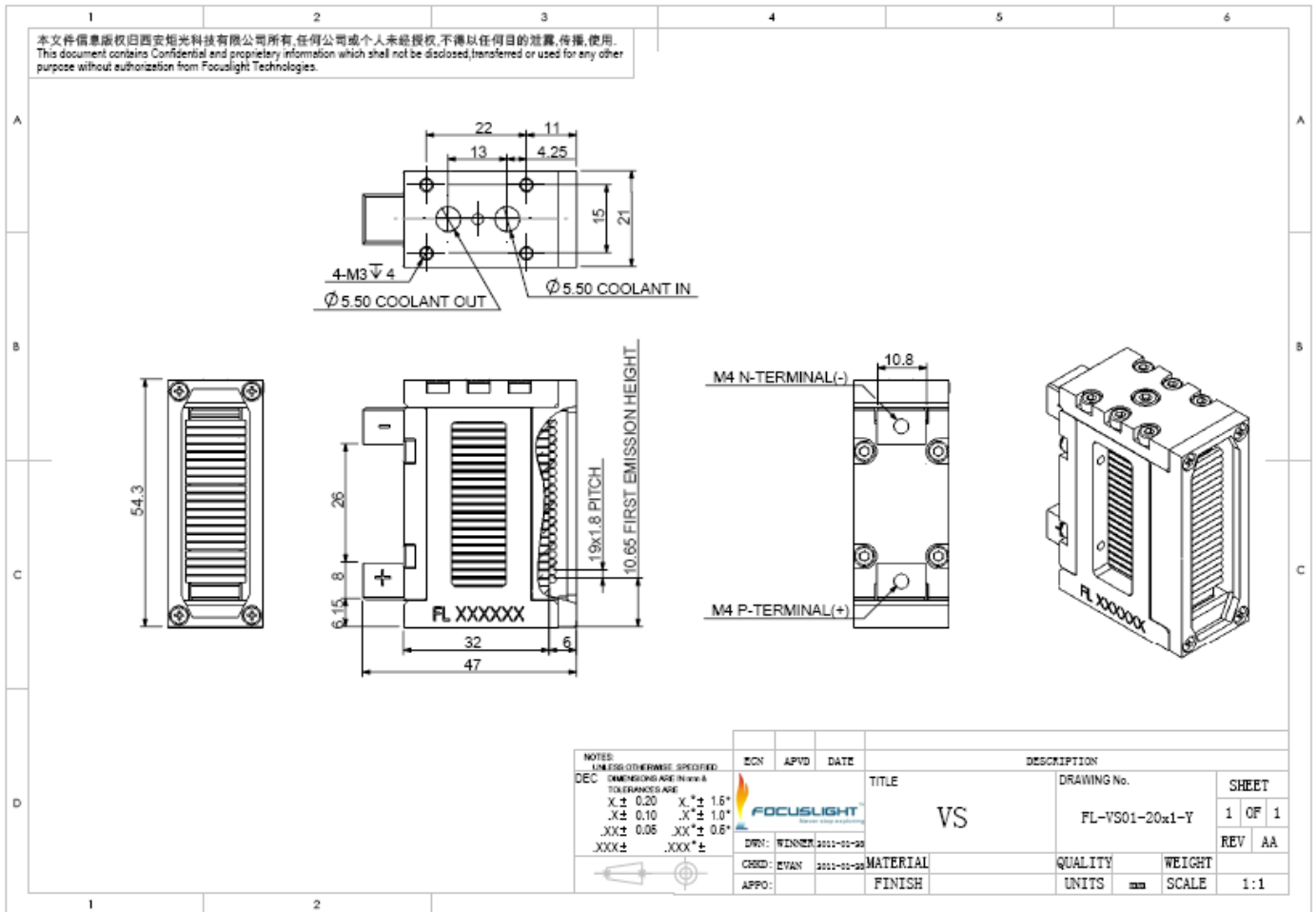
### Features

- Long lifetime
- Uniform beam profile
- High power

### Applications

- Pumping
- Scientific research
- Industry

## Device Dimension (mm)



This structure drawing is only for reference. More structure drawings can be found below the datasheet. For any other special requirement, please feel free to contact us.

# Micro-Channel Water Cooled Vertical Stack Diode Laser (QCW)

## Specification

Module Type <sup>1</sup>	Units	FL-VS**-N- ##-808(Q)	FL-VS**-N- ##-808(Q)	FL-VS**-N- ##-808(Q)	FL-VS**-N- ##-808(Q)
<b>Optical</b> <sup>3,7</sup>					
Center Wavelength $\lambda$	nm	808	808	808	808
Wavelength Tolerance	nm	$\pm 3$	$\pm 3$	$\pm 5$	$\pm 5$
Output Power per Bar <sup>2</sup>	W	150	200	250	300
Number of Bars	#	1~25, 40, 60	1~25, 40, 60	1~25, 40, 60	1~25, 40, 60
Bar-to-Bar Spacing	mm	1.8, 2.4, 2.4	1.8, 2.4, 2.4	1.8, 2.4, 2.4	1.8, 2.4, 2.4
Spectral Width FWHM	nm	$\leq 4$	$\leq 4$	$\leq 3.5$	$\leq 4$
Spectral Width FW90%E	nm	$\leq 6$	$\leq 6$	$\leq 6$	$\leq 7$
Fast Axis Divergence(FWHM) <sup>4,6</sup>	degree	35	35	35	35
Slow Axis Divergence (FWHM)	degree	8	8	8	8
Pulse Width	ms	$\leq 0.3$	$\leq 0.3$	$\leq 0.2$	$\leq 0.2$
Duty Cycle	%	$\leq 10$	$\leq 10$	$\leq 10$	$\leq 10$
Polarization Mode	-	TE	TE	TE	TE
Wavelength Temp. Coefficient	nm/°C	-0.28	-0.28	-0.28	-0.28
<b>Electrical Parameters</b> <sup>3,7</sup>					
Operating Current $I_{op}$	A	$\leq 170$	$\leq 190$	$\leq 250$	$\leq 300$
Threshold Current $I_{th}$	A	$\leq 15$	$\leq 26$	$\leq 26$	$\leq 26$
Operating Voltage $V_{op}$	V	$\leq 2$	$\leq 2$	$\leq 2$	$\leq 2$
Slope Efficiency	W/A	$\geq 1$	$\geq 1.1$	$\geq 1.15$	$\geq 1.1$
Power Conversion Efficiency	%	$\geq 45$	$\geq 50$	$\geq 50$	$\geq 50$
<b>Thermal Parameters</b>					
Operating Temperature	°C	15~30	15~30	15~30	15~30
Storage Temperature <sup>5</sup>	°C	0~55	0~55	0~55	0~55
Coolant	-	Deionized Water	Deionized Water	Deionized Water	Deionized Water
Flow Rate/Bar	L/min	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7
Max Inlet Pressure	kPa	380	380	380	380
Resistivity	M $\Omega$ *cm	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5

<sup>1</sup>Explanation for the name of Module Type: FL(abbreviation of Focuslight) -VS\*\*(structure code) -N(Number of Bars) -##(Power) -808(center wavelength)(Q:QCW)

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

<sup>3</sup>Data at 25°C temperature, unless otherwise stated.

<sup>4</sup>For fast axis collimation: divergence <0.5°.

<sup>5</sup>A non-condensing environment is required for storage and operation below ambient dew point

<sup>6</sup>For smile requirements, please contact us.

<sup>7</sup>If there are any other requirements, please contact us.

# Micro-Channel Water Cooled Vertical Stack Diode Laser (QCW)

## Specification

Module Type <sup>1</sup>	Units	FL-VS**-N- ##-940(Q)	FL-VS**-N- ##-940(Q)	FL-VS**-N- ##-940(Q)
<b>Optical</b> <sup>3,7</sup>				
Center Wavelength $\lambda$	nm	940	940	940
Wavelength Tolerance	nm	$\pm 5$	$\pm 5$	$\pm 5$
Output Power per Bar <sup>2</sup>	W	200	250	300
Number of Bars	#	1~25, 40, 60	1~25, 40, 60	1~25, 40, 60
Bar-to-Bar Spacing	mm	1.8, 2.4, 2.4	1.8, 2.4, 2.4	1.8, 2.4, 2.4
Spectral Width FWHM	nm	$\leq 6$	$\leq 6$	$\leq 6$
Spectral Width FW90%E	nm	$\leq 8$	$\leq 8$	$\leq 8$
Fast Axis Divergence(FWHM) <sup>4,6</sup>	degree	35	35	35
Slow Axis Divergence (FWHM)	degree	8	8	8
Pulse Width	ms	$\leq 0.3$	$\leq 0.2$	$\leq 0.2$
Duty Cycle	%	$\leq 10$	$\leq 8$	$\leq 4$
Polarization Mode	-	TE	TE	TE
Wavelength Temp. Coefficient	nm/°C	-0.32	-0.32	-0.32
<b>Electrical Parameters</b> <sup>3,7</sup>				
Operating Current $I_{op}$	A	$\leq 200$	$\leq 250$	$\leq 300$
Threshold Current $I_{th}$	A	$\leq 18$	$\leq 18$	$\leq 18$
Operating Voltage $V_{op}$	V	$\leq 2$	$\leq 2$	$\leq 2$
Slope Efficiency	W/A	$\geq 1.05$	$\geq 1.1$	$\geq 1.1$
Power Conversion Efficiency	%	$\geq 50$	$\geq 50$	$\geq 50$
<b>Thermal Parameters</b>				
Operating Temperature	°C	15~30	15~30	15~30
Storage Temperature <sup>5</sup>	°C	0~55	0~55	0~55
Coolant	-	Deionized Water	Deionized Water	Deionized Water
Flow Rate/Bar	L/min	0.4-0.7	0.4-0.7	0.4-0.7
Max Inlet Pressure	kPa	380	380	380
Resistivity	M $\Omega$ *cm	0.2-0.5	0.2-0.5	0.2-0.5

<sup>1</sup>Explanation for the name of Module Type: FL(abbreviation of Focuslight) -VS\*\*(structure code) -N(Number of Bars) -##(Power) -808(center wavelength)(Q:QCW)

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

<sup>3</sup>Data at 25°C temperature, unless otherwise stated.

<sup>4</sup>For fast axis collimation: divergence <0.5°.

<sup>5</sup>A non-condensing environment is required for storage and operation below ambient dew point

<sup>6</sup>For smile requirements, please contact us.

<sup>7</sup>If there are any other requirements, please contact us.



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Device Dimension (mm)

