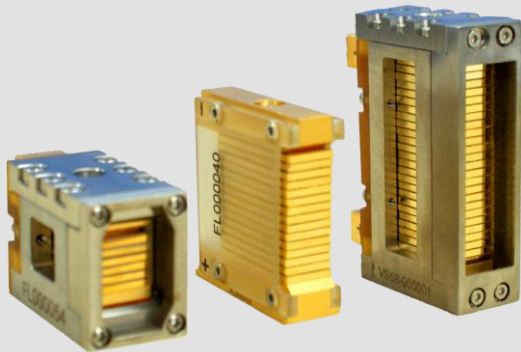


Micro-Channel Water Cooled Vertical Stack Diode Laser (CW)



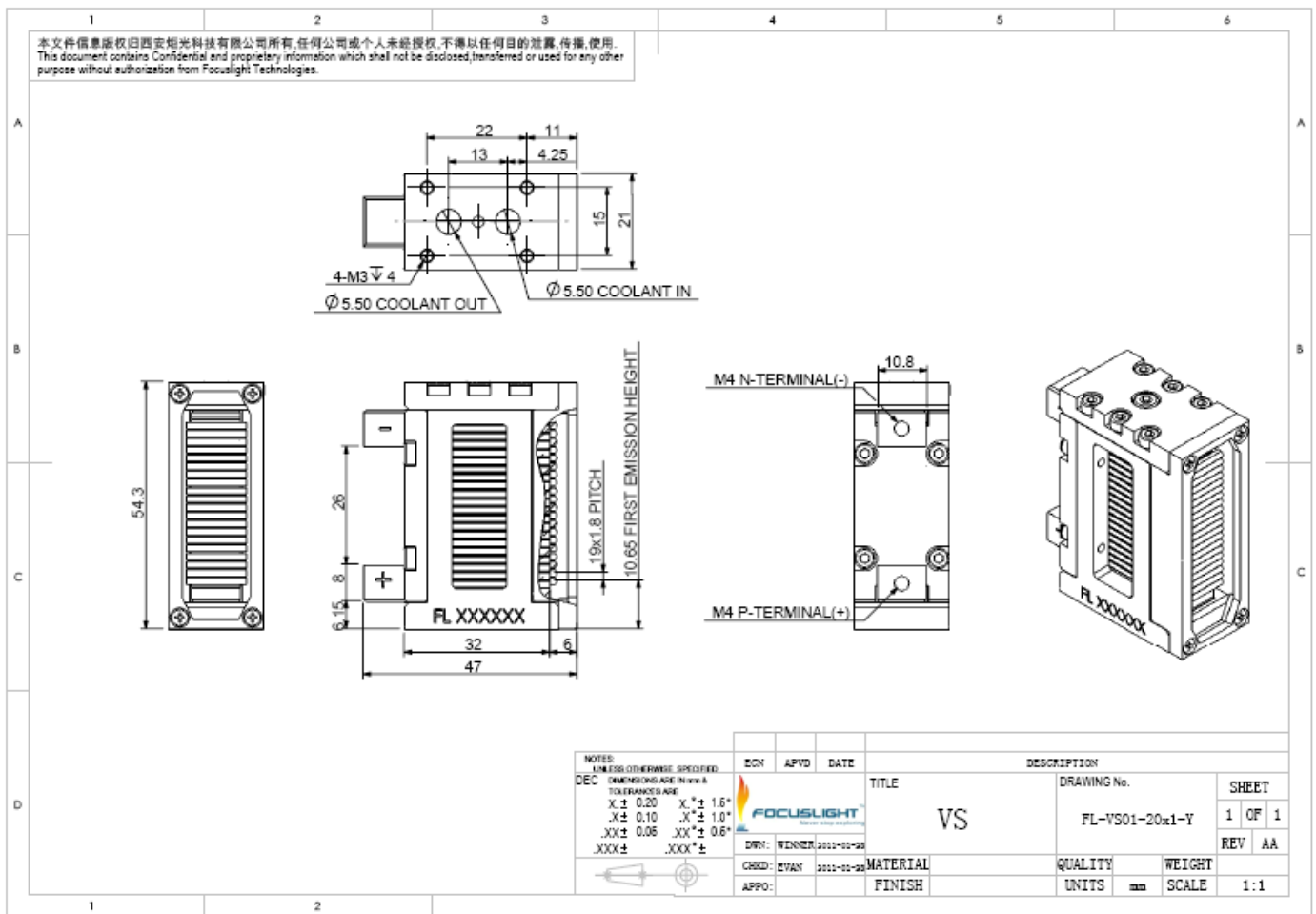
Features

- Long lifetime
- Uniform beam profile
- High power

Applications

- Pumping
- Scientific research
- Industry

Device Dimension (mm)



1 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.

2 Drawings for 2-25 bars are available. Please contact Focuslight for details.

Micro-Channel Water Cooled Vertical Stack Diode Laser (CW)

Specification

Module Type ¹	Units	FL-VS**-N- ##-792	FL-VS**-N-##-808	FL-VS**-N- ##-808	FL-VS**-N-##-808	FL-VS**-N- ##-808
Optical ^{3,8}						
Center Wavelength λ	nm	792	808	808	808	808
Wavelength Tolerance	nm	± 3	± 10	± 3	± 10	± 5
Output Power per Bar ²	W	60	40	60	60	80
Number of bars	#	2~25	3~12	2~25	3~12	2~25
Bar-to-Bar Spacing	mm	1.8	1.8	1.8	1.8	1.8
Spectral Width FWHM	nm	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3
Spectral Width FW90%E	nm	≤ 6	≤ 6	≤ 6	≤ 6	≤ 6
Fast Axis Divergence(FWHM) ^{4,7}	degree	35	35	35	35	35
Slow Axis Divergence (FWHM) ⁵	degree	8	8	8	8	8
Polarization Mode	-	TE	TE/TM	TE/TM	TE/TM	TE
Wavelength Temp. Coefficient	nm/°C	~ 0.28	~ 0.28	~ 0.28	~ 0.28	~ 0.28
Electrical Parameters ^{3,8}						
Operating Current I_{op}	A	≤ 70	≤ 45	≤ 72	≤ 72	≤ 90
Threshold Current I_{th}	A	≤ 13	≤ 12	≤ 18	≤ 18	≤ 22
Operating Voltage V_{op}	V	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Slope Efficiency	W/A	≥ 1.1	≥ 1.05	≥ 1.1	≥ 1.1	≥ 1.05
Power Conversion Efficiency	%	≥ 48	≥ 46	≥ 46	≥ 46	≥ 48
Thermal Parameters						
Operating Temperature	°C	15~30	15~30	15~30	15~30	15~30
Storage Temperature ⁶	°C	0~55	0~55	0~55	0~55	0~55
Coolant	-	Deionized Water	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	0.4~0.7
Max Inlet Pressure	kPa	380	380	380	380	380
Resistivity	M Ω *cm	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5

¹Explanation for the name of Module Type: FL(abbreviation of Focuslight) - VS**(structure code) -N(Number of Bars) -##(Power) -808(center wavelength).

²Reduced lifetime if used above nominal operating conditions.

³Data at 25°C temperature, unless otherwise stated.

⁴For fast axis collimation: divergence $< 0.5^\circ$.

⁵Fill factor $< 30\%$, slow axis collimation $\leq 5^\circ$; fast and slow axis collimation at the same time is available.

⁶A non-condensing environment is required for storage and operation below ambient dew point

⁷For smile requirements, please contact us.

⁸If there are any other requirements, please contact us.

Micro-Channel Water Cooled Vertical Stack Diode Laser (CW)

Specification

Module Type ¹	Units	FL-VS**-N-##-808	FL-VS**-N-##-808	FL-VS**-N-##-825	FL-VS**-N-##-880	FL-VS**-N-##-915
Optical ^{3,8}						
Center Wavelength λ	nm	808	808	825	880	915
Wavelength Tolerance	nm	± 10	± 3	± 3	± 3	± 5
Output Power per Bar ²	W	80	100	60	60	80
Number of bars	#	3~12	2~25	2~25	2~25	2~25
Bar-to-Bar Spacing	mm	1.8	1.8	1.8	1.8	1.8
Spectral Width FWHM	nm	≤ 3	≤ 4	≤ 3	≤ 3	≤ 4
Spectral Width FW90%E	nm	≤ 6	≤ 6	≤ 6	≤ 6	≤ 7
Fast Axis Divergence(FWHM) ^{4,7} degree		35	35	35	35	35
Slow Axis Divergence (FWHM) ⁵ degree		8	8	8	8	8
Polarization Mode	-	TE/TM	TE/TM	TE/TM	TE	TE
Wavelength Temp. Coefficient	nm/°C	~ 0.28	~ 0.28	~ 0.28	~ 0.30	~ 0.31
Electrical Parameters ^{3,8}						
Operating Current I_{op}	A	≤ 90	≤ 116	≤ 75	≤ 65	≤ 82
Threshold Current I_{th}	A	≤ 22	≤ 23	≤ 17	≤ 12	≤ 8
Operating Voltage V_{op}	V	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Slope Efficiency	W/A	≥ 1.05	≥ 1	≥ 1	≥ 1.1	≥ 1.05
Power Conversion Efficiency	%	≥ 48	≥ 42	≥ 48	≥ 50	≥ 50
Thermal Parameters						
Operating Temperature	°C	15~30	15~30	15~30	15~30	15~30
Storage Temperature ⁶	°C	0~55	0~55	0~55	0~55	0~55
Coolant	-	Deionized Water	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	0.4-0.7
Max Inlet Pressure	kPa	380	380	380	380	380
Resistivity	M Ω *cm	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5

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Micro-Channel Water Cooled Vertical Stack Diode Laser (CW)

Specification

Module Type ¹	Units	FL-VS**-N- ##-915	FL-VS**-N- ##-940	FL-VS**-N- ##-940	FL-VS**-N- ##-940	FL-VS**-N- ##-976
Optical ^{3,8}						
Center Wavelength λ	nm	915	940	940	940	976
Wavelength Tolerance	nm	± 5	± 5	± 5	± 5	± 5
Output Power per Bar ²	W	120	80	100	120	60
Number of Bars	#	2~25	2~25	2~25	2~25	2~25
Bar-to-Bar Spacing	mm	1.8	1.8	1.8	1.8	1.8
Spectral Width FWHM	nm	≤ 5	≤ 4	≤ 4	≤ 5	≤ 3
Spectral Width FW90%E	nm	≤ 8	≤ 7	≤ 8	≤ 8	≤ 6
Fast Axis Divergence(FWHM) ^{4,7} degree		35	35	35	35	35
Slow Axis Divergence (FWHM) ⁵ degree		8	8	8	8	8
Polarization Mode	-	TE	TE	TE	TE	TE
Wavelength Temp. Coefficient	nm/°C	~ 0.32	~ 0.32	~ 0.32	~ 0.32	~ 0.34
Electrical Parameters ^{3,8}						
Operating Current I_{op}	A	≤ 120	≤ 85	≤ 105	≤ 120	≤ 65
Threshold Current I_{th}	A	≤ 20	≤ 15	≤ 8	≤ 20	≤ 7
Operating Voltage V_{op}	V	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Slope Efficiency	W/A	≥ 1.1	≥ 1.05	≥ 1.05	≥ 1.1	≥ 1.05
Power Conversion Efficiency	%	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50
Thermal Parameters						
Operating Temperature	°C	15~30	15~30	15~30	15~30	15~30
Storage Temperature ⁶	°C	0~55	0~55	0~55	0~55	0~55
Coolant	-	Deionized Water	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	0.4-0.7
Max Inlet Pressure	kPa	380	380	380	380	380
Resistivity	M Ω *cm	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5	0.2-0.5

¹Explanation for the name of Module Type: FL(abbreviation of Focuslight) -VS**(structure code) -N(Number of Bars) -##(Power) -808(center wavelength).

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Micro-Channel Water Cooled Vertical Stack Diode Laser (CW)

Specification

Module Type ¹	Units	FL-VS**-N- ##-976	FL-VS**-N- ##-976	FL-VS**-N- ##-976
Optical ^{3,8}				
Center Wavelength λ	nm	976	976	976
Wavelength Tolerance	nm	± 5	± 5	± 5
Output Power per Bar ²	W	80	100	120
Number of Bars	#	2~25	2~25	2~25
Bar-to-Bar Spacing	mm	1.8	1.8	1.8
Spectral Width FWHM	nm	≤ 4	≤ 4	≤ 5
Spectral Width FW90%E	nm	≤ 7	≤ 6	≤ 8
Fast Axis Divergence(FWHM) ^{4,7}	degree	35	35	35
Slow Axis Divergence (FWHM) ⁵	degree	8	8	8
Polarization Mode	-	TE	TE	TE
Wavelength Temp. Coefficient	nm/°C	-0.34	-0.32	-0.32
Electrical Parameters ^{3,8}				
Operating Current I_{op}	A	≤ 88	≤ 105	≤ 120
Threshold Current I_{th}	A	≤ 9	≤ 7	≤ 20
Operating Voltage V_{op}	V	≤ 2	≤ 2	≤ 2
Slope Efficiency	W/A	≥ 0.95	≥ 0.95	≥ 1.1
Power Conversion Efficiency	%	≥ 50	≥ 50	≥ 50
Thermal Parameters				
Operating Temperature	°C	15~30	15~30	15~30
Storage Temperature ⁶	°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 Ω *cm	0.2-0.5	0.2-0.5	0.2-0.5

¹Explanation for the name of Module Type: FL(abbreviation of Focuslight) -VS**(structure code) -N(Number of Bars) -##(Power) -808(center wavelength).

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Device Dimension (mm)

