

FocusEngine™

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

MCC



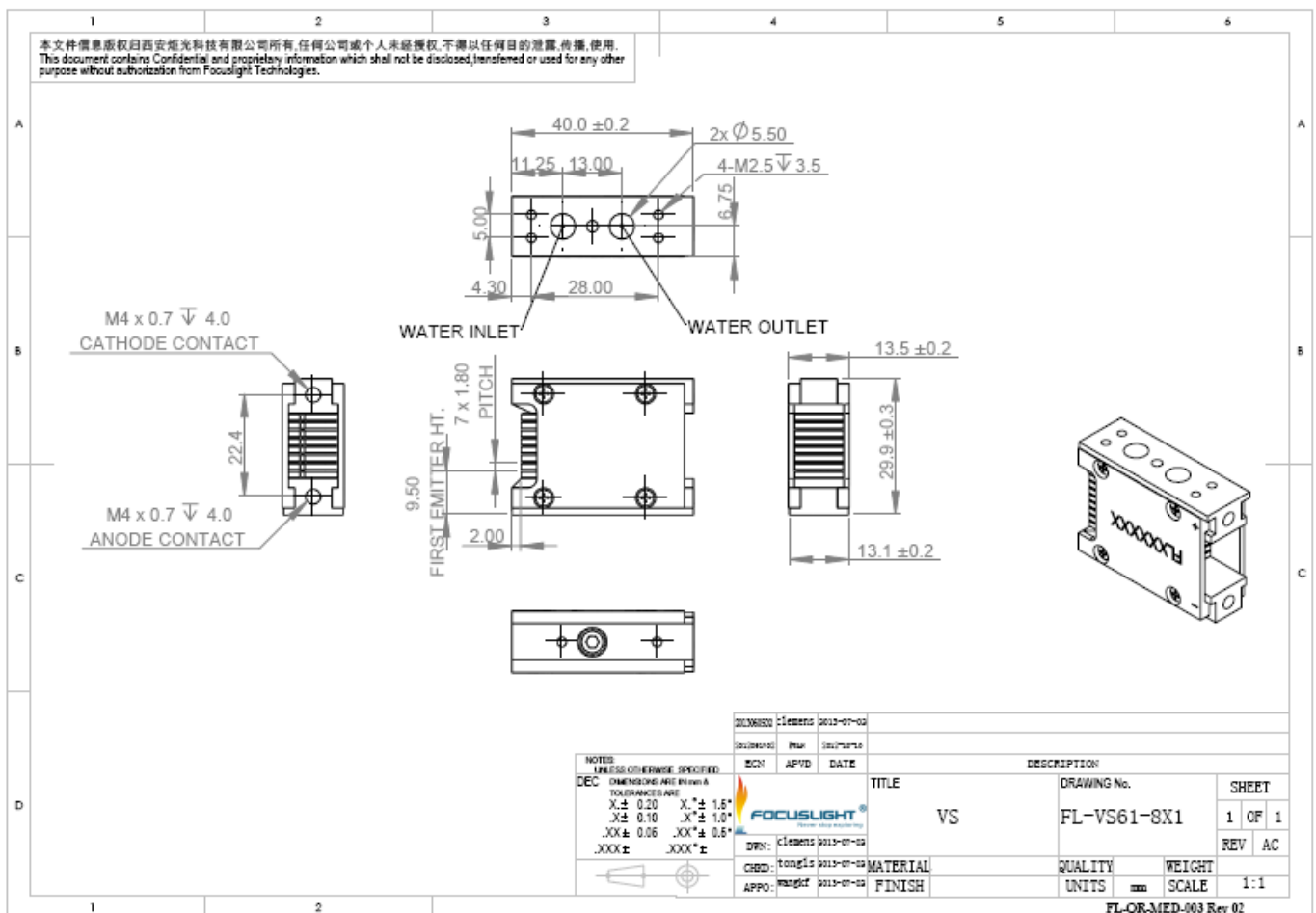
Features

- Long lifetime
- Uniform beam profile
- High power

Applications

- Medical & Cosmetic
- Pumping
- Scientific research
- Industry

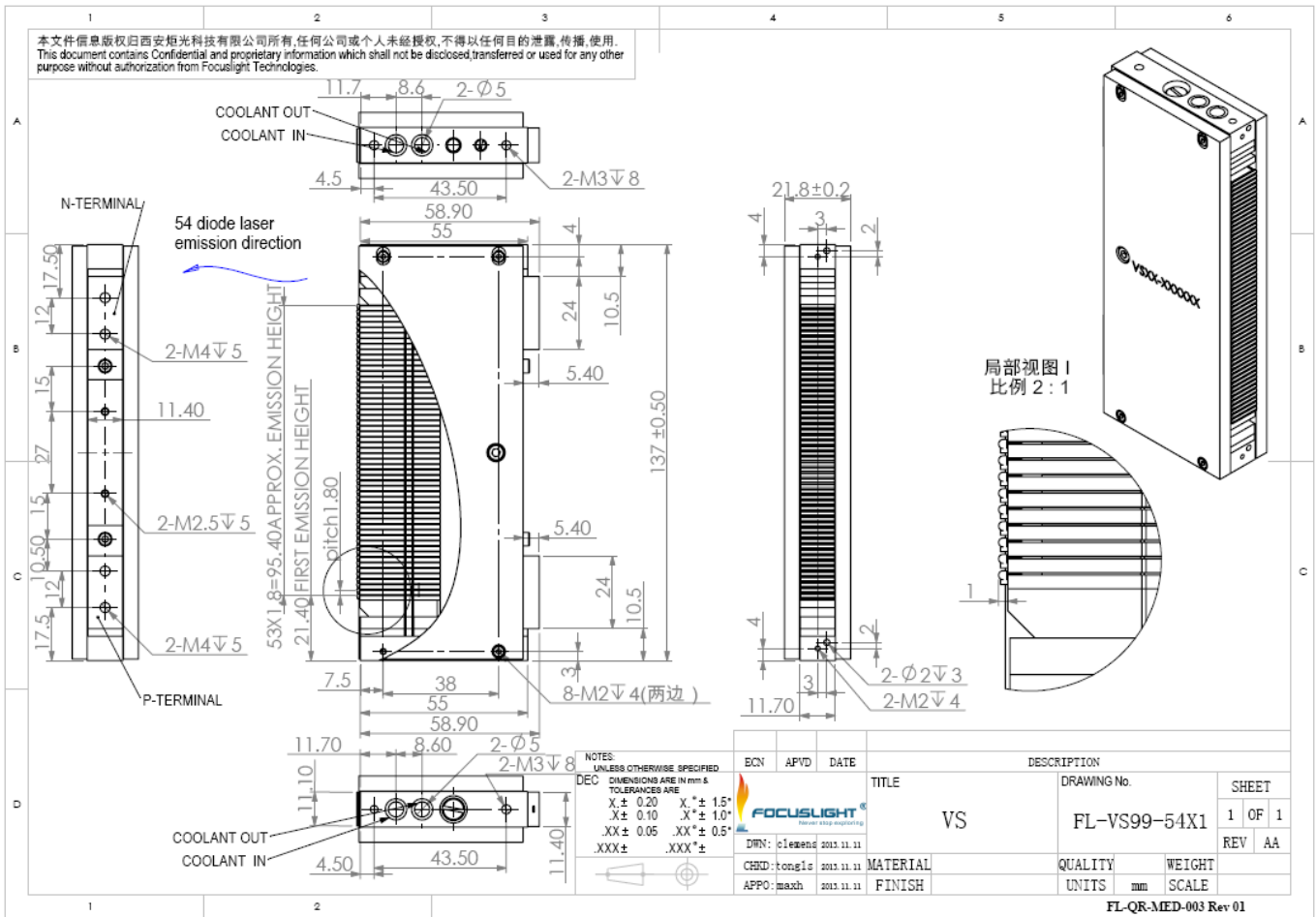
Device Dimension (mm)



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 1-12 bars are available. Please contact Focuslight for details.

Device Dimension (mm)



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2 Drawings for 1-60 bars are available. Please contact Focuslight for details.

Specification

| Module Type ¹ | Units | FL-VS**-N- ##-808 | FL-VS**-N- ##-808 | FL-VS**-N- ##-808 | FL-VS**-N- ##-9XX | FL-VS**-N- ##-9xx |
|---|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Optical ² | | | | | | |
| Center Wavelength λ | nm | 808 | 808 | 808 | 9XX | 9XX |
| Wavelength Tolerance | nm | ± 3 | ± 5 | ± 10 | ± 5 | ± 5 |
| Output Power per Bar ³ | W | 100 | 100 | 100 | 100 | 120 |
| Number of bars | # | 1~60 | 1~60 | 1~60 | 1~60 | 1~40 |
| Bar-to-Bar Spacing | mm | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Spectral Width FWHM | nm | ≤ 3 | ≤ 3 | ≤ 3 | ≤ 4 | ≤ 4 |
| Spectral Width FW90%E | nm | ≤ 6 | ≤ 6 | ≤ 6 | ≤ 8 | ≤ 8 |
| Fast Axis Divergence(95%) ^{4,9} | degree | 70 | 70 | 70 | 55 | 55 |
| Slow Axis Divergence (95%) ⁵ | degree | 12 | 12 | 12 | 12 | 12 |
| Polarization Mode | - | TE/TM | TE | TE/TM | TE | TE |
| Wavelength Temp. Coefficient | nm/°C | ~ 0.28 | ~ 0.28 | ~ 0.28 | ~ 0.28 | ~ 0.28 |
| Electrical Parameters ³ | | | | | | |
| Operating Current I_{op} | A | ≤ 120 | ≤ 120 | ≤ 120 | ≤ 110 | ≤ 120 |
| Threshold Current I_{th} | A | ≤ 25 | ≤ 25 | ≤ 25 | ≤ 15 | ≤ 20 |
| Operating Voltage V_{op} ⁶ | V | ≤ 2.0 | ≤ 2.0 | ≤ 2.0 | ≤ 1.8 | ≤ 1.8 |
| Slope Efficiency ⁶ | W/A | ≥ 1.1 | ≥ 1.1 | ≥ 1.1 | ≥ 1.1 | ≥ 1.1 |
| Power Conversion Efficiency | % | ≥ 48 | ≥ 48 | ≥ 48 | ≥ 60 | ≥ 60 |
| Thermal Parameters | | | | | | |
| Operating Temperature ⁷ | °C | 20~30 | 20~30 | 20~30 | 20~30 | 20~30 |
| Storage Temperature ⁸ | °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 | 0.3~0.4 | 0.3~0.4 | 0.3~0.4 | 0.3~0.4 | 0.3~0.4 |
| Max Inlet Pressure | kPa | 380 | 380 | 380 | 380 | 380 |
| Conductivity | $\mu s \cdot cm^{-1}$ | < 5 | < 5 | < 5 | < 5 | < 5 |

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

²Data at 25°C temperature, unless otherwise stated.

³Standard power configuration : 60W/Bar, 80W/Bar, 100 W/Bar

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.

⁶Parameters for single Bar

⁷If exceed operating temperature, the device lifetime will be impacted, which will cause wavelength drift

⁸Please avoid use and storage in the condensation environment

⁹For smile requirements, please contact us.

Please feel free to contact with Focuslight if you have any requirement.



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