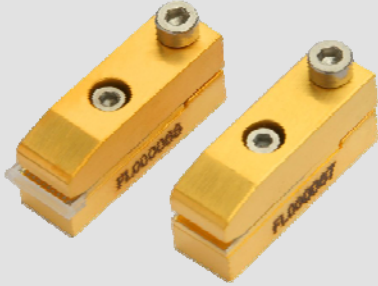


FocusEngine™

Micro-Channel Water Cooled Single Bar Diode Laser (QCW)

MCC09



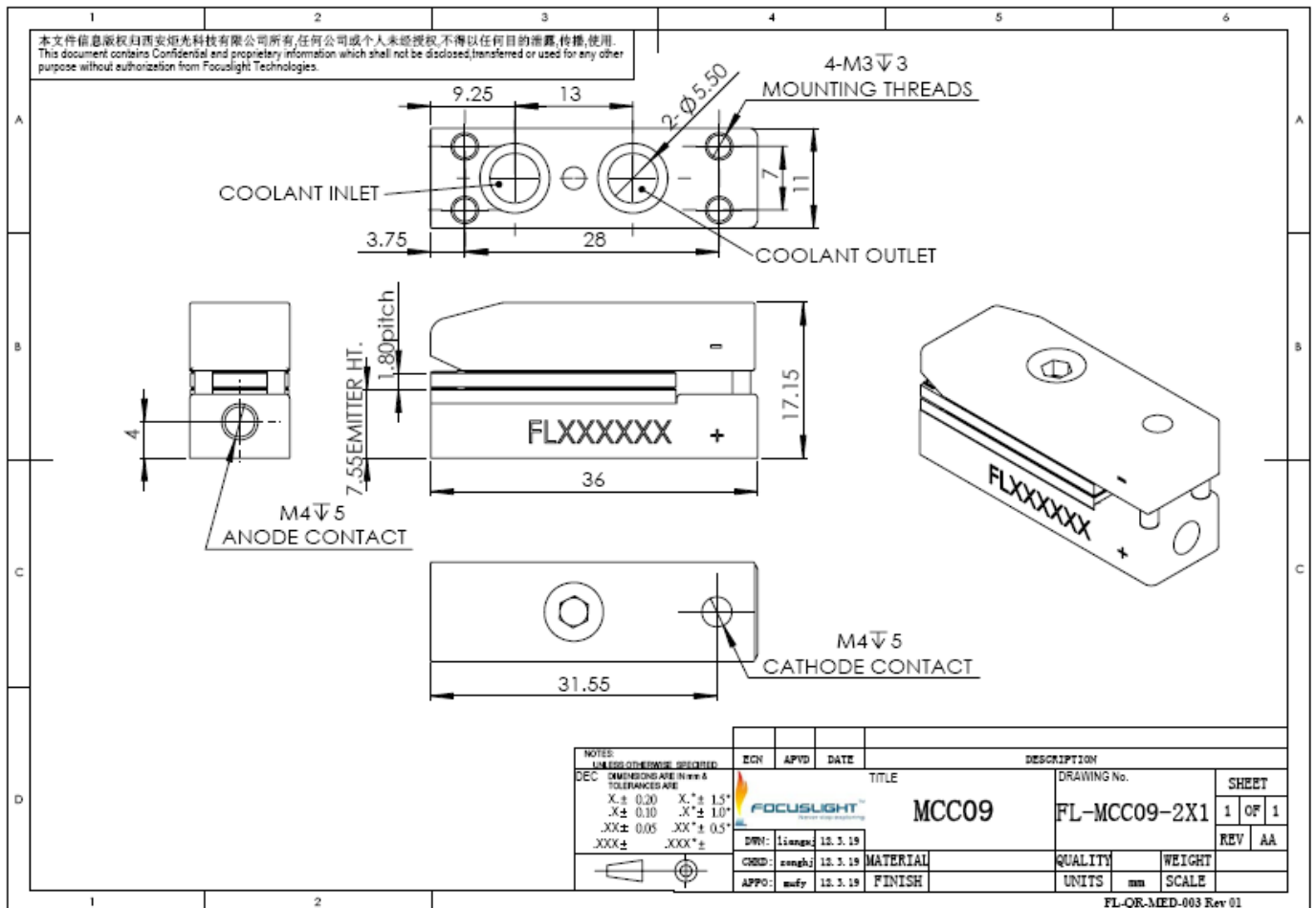
Features

- Long lifetime
- Low smile
- High power
- Narrow spectrum

Applications

- Pumping
- Scientific research
- Industry

Device Dimension (mm)



This structure drawing is only for reference. For any other special requirement, please feel free to contact us.

Specification

Module Type ¹	Units	FL-MCC09-150-808(Q)	FL-MCC09-200-808(Q)	FL-MCC09-250-808(Q)	FL-MCC09-200-940(Q)	FL-MCC09-250-940(Q)	FL-MCC09-300-940(Q)
Optical ^{3,7}							
Center Wavelength λ	nm	808	808	808	940	940	940
Wavelength Tolerance	nm	± 3	± 3	± 3	± 5	± 5	± 5
Output Power ²	W	150	200	250	200	250	300
Spectral Width FWHM	nm	≤ 4	≤ 4	≤ 3.5	≤ 6	≤ 4	≤ 6
Spectral Width FW90%E	nm	≤ 6	≤ 6	≤ 6	≤ 8	≤ 6	≤ 8
Fast Axis Divergence(FWHM) ⁴ degree		35	35	35	35	35	35
Slow Axis Divergence (FWHM) degree		8	8	8	8	8	8
Pulse Width	ms	≤ 0.3	≤ 0.2	≤ 0.2	≤ 0.3	≤ 0.2	≤ 0.2
Duty Cycle	%	≤ 10	≤ 10	≤ 10	≤ 10	≤ 8	≤ 4
Polarization Mode	-	TE	TE	TE	TE	TE	TE
Wavelength Temp. Coefficient	nm/ $^{\circ}\text{C}$	~ 0.28	~ 0.28	~ 0.28	~ 0.33	~ 0.33	~ 0.33
Electrical Parameters ^{3,7}							
Operating Current I_{op}	A	≤ 160	≤ 180	≤ 250	≤ 200	≤ 250	≤ 300
Threshold Current I_{th}	A	≤ 15	≤ 30	≤ 26	≤ 18	≤ 18	≤ 18
Operating Voltage V_{op}	V	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Slope Efficiency	W/A	≥ 1	≥ 1.1	≥ 1.15	≥ 1.1	≥ 1.1	≥ 1.1
Power Conversion Efficiency	%	≥ 45	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50
Thermal Parameters							
Operating Temperature	$^{\circ}\text{C}$	15~30	15~30	15~30	15~30	15~30	15~30
Storage Temperature ⁵	$^{\circ}\text{C}$	0~55	0~55	0~55	0~55	0~55	0~55
Coolant	-	DI Water	DI Water	DI Water	DI Water	DI Water	DI 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	0.4-0.7
Max Inlet Pressure	kPa	380	380	380	380	380	380
Conductivity	$\mu\text{s}\cdot\text{cm}^{-1}$	< 5	< 5	< 5	< 5	< 5	< 5

¹Explanation for the name of Module Type: FL(abbreviation of Focuslight) –MCC09(structure code) -150(output power) -808(center wavelength)(Q:QCW).

²Reduced lifetime if used above nominal operating conditions.

³Data at 25 $^{\circ}\text{C}$ temperature, unless otherwise stated.

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

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

⁶For smile requirements, please contact us.

⁷If there are any other requirements, please contact us.



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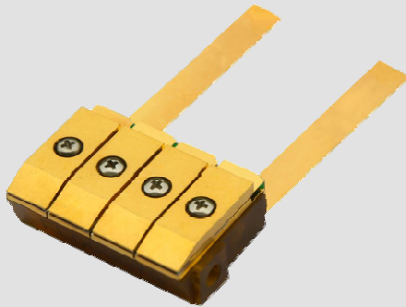
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FocusPump™

Micro-Channel Water Cooled Horizontal Array Diode Laser (QCW)

012HA



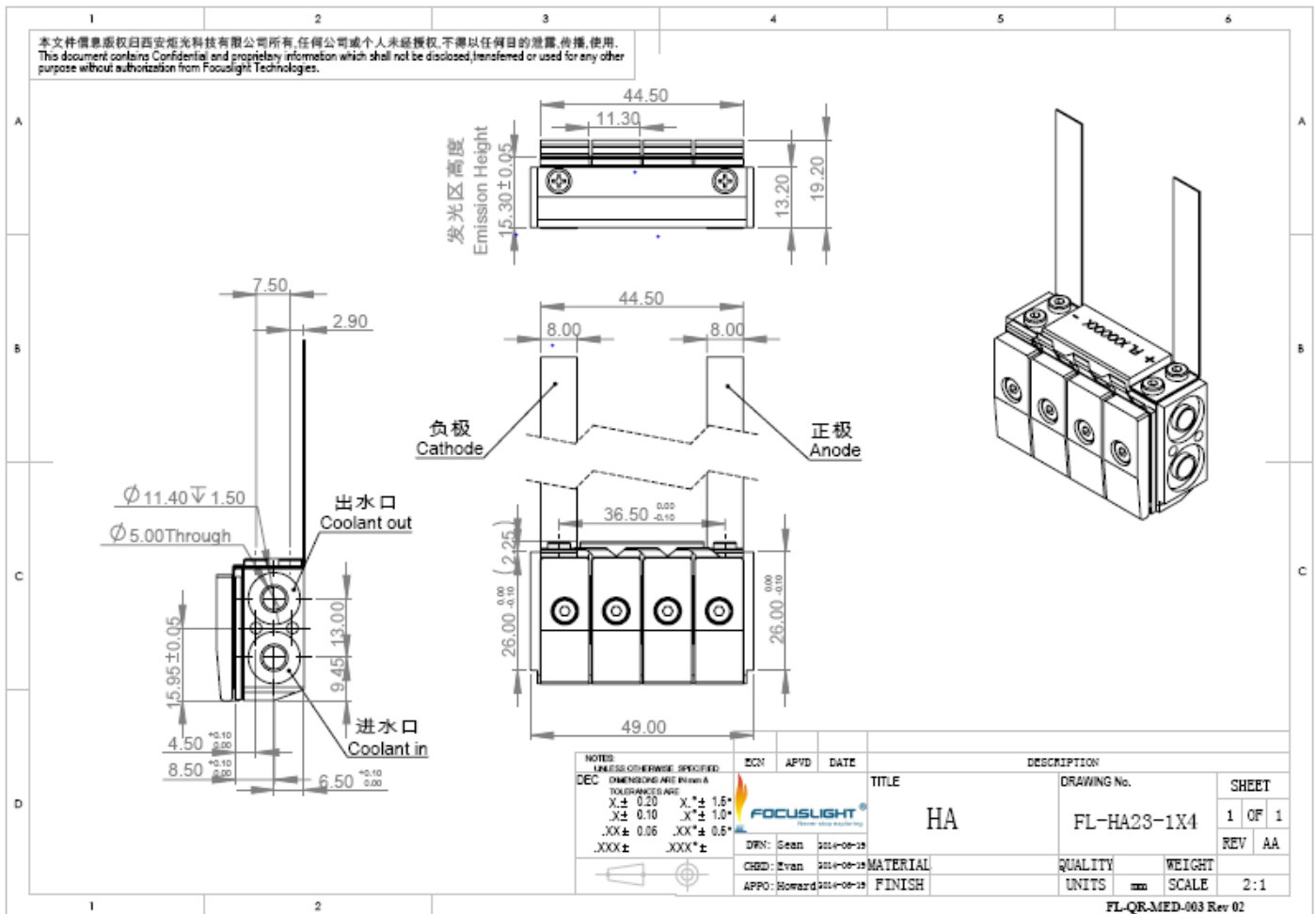
Features

- Long lifetime
- Narrow spectrum
- High power
- Ease of repair

Applications

- Pumping
- Scientific research
- Industry

Device Dimension (mm)



1 This structure drawing is only for reference. For any other special requirement, please feel free to contact us.

2 The above drawings is for 4 bars only. Please contact Focuslight for details.

Specification

Module Type ¹	Units	FL-HA**-N- ##-808(Q)	FL-HA**-N- ##-808(Q)	FL-HA**-N- ##-808(Q)	FL-HA**-N- ##-808(Q)	FL-HA**-N- ##-808(Q)
Optical ^{3,5}						
Center Wavelength λ	nm	808	808	808	808	808
Wavelength Tolerance	nm	± 3	± 3	± 3	± 3	± 3
Output Power per Bar ²	W	150	200	250	300	350
Number of bars	#	1~10	1~10	1~10	1~10	1~10
Pulse Width	ms	≤ 0.3	≤ 0.3	≤ 0.2	≤ 0.2	≤ 0.2
Duty Cycle	%	≤ 10	≤ 10	≤ 8	≤ 8	≤ 8
Spectral Width FWHM	nm	≤ 4	≤ 4	≤ 3.5	≤ 4	≤ 4.5
Spectral Width FW90%E	nm	≤ 6	≤ 6	≤ 6	≤ 6	≤ 7
Fast Axis Divergence(FWHM)	degree	35	35	35	35	35
Slow Axis Divergence (FWHM)	degree	8	8	8	8	8
Polarization Mode	-	TE	TE	TE	TE	TE
Wavelength Temp. Coefficient	nm/°C	~ 0.28	~ 0.28	~ 0.28	~ 0.28	~ 0.28
Electrical Parameters ^{3,5}						
Operating Current I_{op}	A	≤ 180	≤ 190	≤ 250	≤ 280	≤ 330
Threshold Current I_{th}	A	≤ 30	≤ 30	≤ 30	≤ 30	≤ 30
Operating Voltage V_{op} / Bar	V	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
Slope Efficiency / Bar	W/A	≥ 1	≥ 1.1	≥ 1.15	≥ 1.15	≥ 1.15
Power Conversion Efficiency	%	≥ 45	≥ 50	≥ 50	≥ 50	≥ 50
Thermal Parameters						
Operating Temperature	°C	20~30	20~30	20~30	20~30	20~30
Storage Temperature ⁴	°C	5~70	5~70	5~70	5~70	5~70
Coolant	-	Deionized Water	Deionized Water	Deionized Water	Deionized Water	Deionized Water
Flow Rate/Bar	L/min	0.2~0.5	0.2~0.5	0.2~0.5	0.2~0.5	0.2~0.5
Max Inlet Pressure	kPa	380	380	380	380	380

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

²Reduced lifetime if used above nominal operating conditions.

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

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

⁵If there are any other requirements, please contact us.

Specification

Module Type ¹	Units	FL-HA**-N- ##-940(Q)	FL-HA**-N- ##-940(Q)
Optical ^{3,5}			
Center Wavelength λ	nm	940	940
Wavelength Tolerance	nm	± 5	± 5
Output Power per Bar ²	W	200	250
Number of bars	#	1~10	1~10
Pulse Width	ms	≤ 0.3	≤ 0.2
Duty Cycle	%	≤ 10	≤ 4
Spectral Width FWHM	nm	≤ 6	≤ 6
Spectral Width FW90%E	nm	≤ 8	≤ 8
Fast Axis Divergence(FWHM)	degree	35	35
Slow Axis Divergence (FWHM)	degree	8	8
Polarization Mode	-	TE	TE
Wavelength Temp. Coefficient	nm/°C	~ 0.33	~ 0.33
Electrical Parameters ^{3,5}			
Operating Current I_{op}	A	≤ 200	≤ 250
Threshold Current I_{th}	A	≤ 30	≤ 30
Operating Voltage V_{op} /Bar	V	≤ 2	≤ 2
Slope Efficiency /Bar	W/A	≥ 1.1	≥ 1.1
Power Conversion Efficiency	%	≥ 50	≥ 50
Thermal Parameters			
Operating Temperature	°C	20~30	20~30
Storage Temperature ⁴	°C	5~70	5~70
Coolant	-	Deionized Water	Deionized Water
Flow Rate/Bar	L/min	0.2~0.5	0.2~0.5
Max Inlet Pressure	kPa	380	380

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

²Reduced lifetime if used above nominal operating conditions.

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