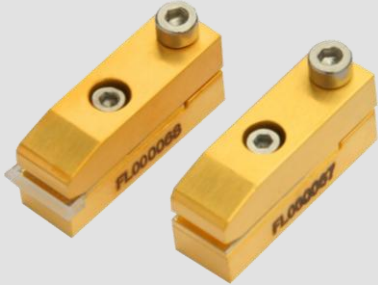


# Micro-Channel Water Cooled Single Bar Diode Laser (CW)



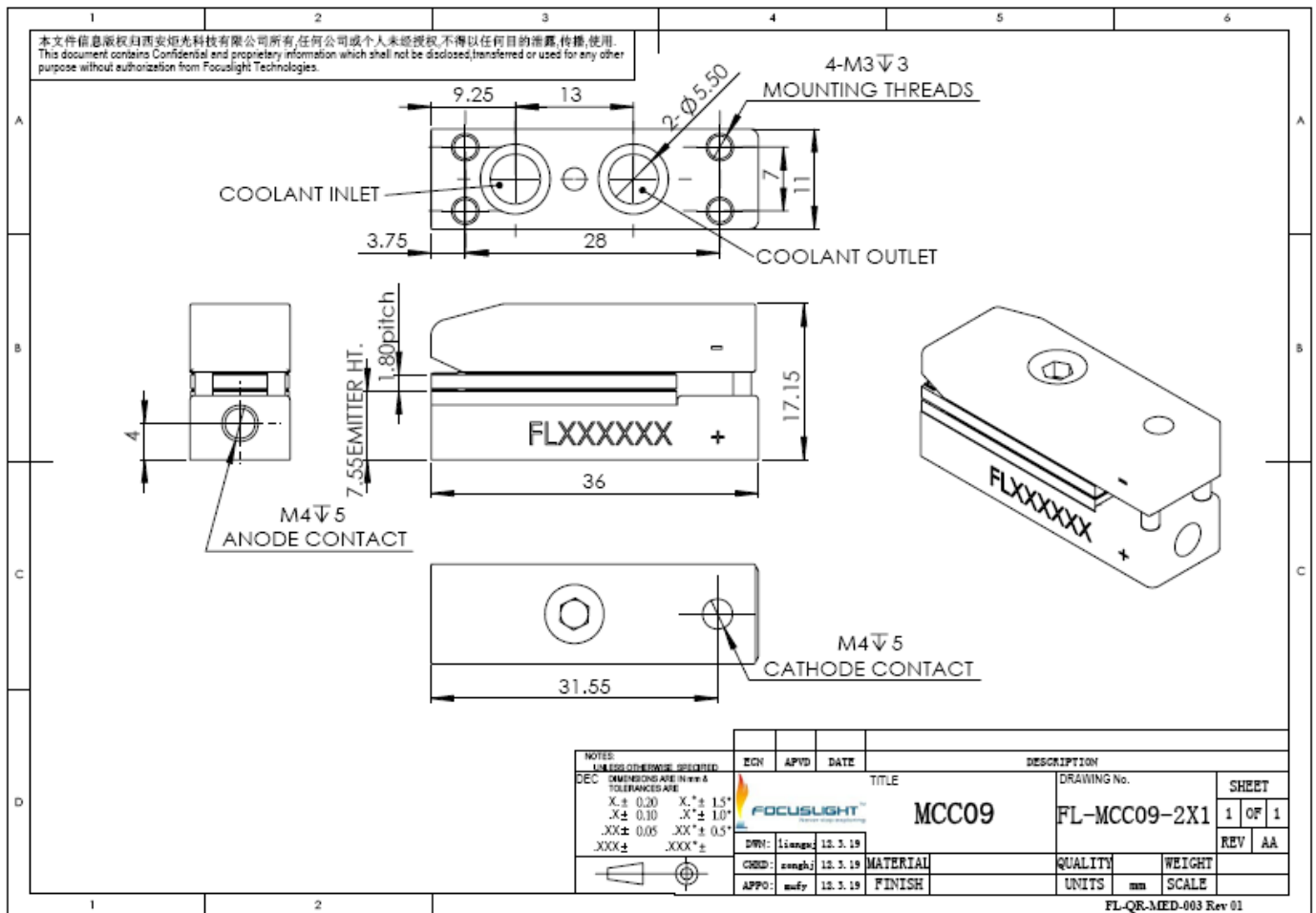
### Features

- 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.

# Micro-Channel Water Cooled Single Bar Diode Laser (CW)

## Specification

Module Type <sup>1</sup>	Units	FL-MCC09-60-792	FL-MCC09-60-808	FL-MCC09-80-808	FL-MCC09-100-808	FL-MCC09-60-825
<b>Optical</b> <sup>3,7</sup>						
Center Wavelength $\lambda$	nm	792	808	808	808	825
Wavelength Tolerance	nm	$\pm 3$	$\pm 3$	$\pm 3$	$\pm 3$	$\pm 3$
Output Power <sup>2</sup>	W	60	60	80	100	60
Spectral Width FWHM	nm	$\leq 3$	$\leq 3$	$\leq 3$	$\leq 3$	$\leq 3$
Spectral Width FW90%E	nm	$\leq 6$	$\leq 6$	$\leq 6$	$\leq 6$	$\leq 6$
Fast Axis Divergence(FWHM) <sup>4,6</sup>	degree	35	35	35	35	35
Slow Axis Divergence (FWHM)	degree	8	8	8	8	8
Polarization Mode	-	TE	TE/TM	TE	TE/TM	TE/TM
Wavelength Temp. Coefficient	nm/°C	$\sim 0.28$	$\sim 0.28$	$\sim 0.28$	$\sim 0.28$	$\sim 0.28$
<b>Electrical Parameters</b> <sup>3,7</sup>						
Operating Current $I_{op}$	A	$\leq 70$	$\leq 72$	$\leq 90$	$\leq 116$	$\leq 75$
Threshold Current $I_{th}$	A	$\leq 13$	$\leq 18$	$\leq 22$	$\leq 26$	$\leq 17$
Operating Voltage $V_{op}$	V	$\leq 2$	$\leq 2$	$\leq 2$	$\leq 2$	$\leq 2$
Slope Efficiency	W/A	$\geq 1.1$	$\geq 1.1$	$\geq 1.05$	$\geq 1.0$	$\geq 1$
Power Conversion Efficiency	%	$\geq 48$	$\geq 46$	$\geq 48$	$\geq 42$	$\geq 48$
<b>Thermal Parameters</b>						
Operating Temperature	°C	15~30	15~30	15~30	15~30	15~30
Storage Temperature <sup>5</sup>	°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 $\Omega$ *cm	0.2-0.5	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) –MCC05(structure code) -40(output power) -808(center wavelength).

<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  $< 0.5^\circ$ .

<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 Single Bar Diode Laser (CW)

## Specification

Module Type <sup>1</sup>	Units	FL-MCC09-60-880	FL-MCC09-80-915	FL-MCC09-120-915	FL-MCC09-80-940	FL-MCC09-100-940
<b>Optical</b> <sup>3,7</sup>						
Center Wavelength $\lambda$	nm	880	915	915	940	940
Wavelength Tolerance	nm	$\pm 3$	$\pm 3$	$\pm 5$	$\pm 3$	$\pm 5$
Output Power <sup>2</sup>	W	60	80	120	80	100
Spectral Width FWHM	nm	$\leq 3$	$\leq 4$	$\leq 5$	$\leq 4$	$\leq 3$
Spectral Width FW90%E	nm	$\leq 6$	$\leq 7$	$\leq 8$	$\leq 7$	$\leq 8$
Fast Axis Divergence(FWHM) <sup>4,€</sup>	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	$\sim 0.30$	$\sim 0.32$	$\sim 0.32$	$\sim 0.33$	$\sim 0.33$
<b>Electrical Parameters</b> <sup>3,7</sup>						
Operating Current $I_{op}$	A	$\leq 65$	$\leq 82$	$\leq 120$	$\leq 85$	$\leq 105$
Threshold Current $I_{th}$	A	$\leq 12$	$\leq 8$	$\leq 20$	$\leq 15$	$\leq 15$
Operating Voltage $V_{op}$	V	$\leq 2$	$\leq 2$	$\leq 2$	$\leq 2$	$\leq 2$
Slope Efficiency	W/A	$\geq 1.1$	$\geq 1.05$	$\geq 1.1$	$\geq 1.05$	$\geq 1.05$
Power Conversion Efficiency	%	$\geq 55$	$\geq 52$	$\geq 50$	$\geq 52$	$\geq 52$
<b>Thermal Parameters</b>						
Operating Temperature	°C	15~30	15~30	15~30	15~30	15~30
Storage Temperature <sup>5</sup>	°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 $\Omega$ *cm	0.2-0.5	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) –MCC05(structure code) -40(output power) -808(center wavelength).

<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 Single Bar Diode Laser (CW)

## Specification

Module Type <sup>1</sup>	Units	FL-MCC09-120-940	FL-MCC09-60-976	FL-MCC09-80-976	FL-MCC09-100-976	FL-MCC09-120-976
<b>Optical</b> <sup>3,7</sup>						
Center Wavelength $\lambda$	nm	940	976	976	976	976
Wavelength Tolerance	nm	$\pm 5$	$\pm 5$	$\pm 3$	$\pm 5$	$\pm 5$
Output Power <sup>2</sup>	W	120	60	80	100	120
Spectral Width FWHM	nm	$\leq 5$	$\leq 3$	$\leq 4$	$\leq 3$	$\leq 5$
Spectral Width FW90%E	nm	$\leq 8$	$\leq 6$	$\leq 7$	$\leq 6$	$\leq 8$
Fast Axis Divergence(FWHM) <sup>4,6</sup>	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	$\sim 0.33$	$\sim 0.34$	$\sim 0.34$	$\sim 0.34$	$\sim 0.34$
<b>Electrical Parameters</b> <sup>3,7</sup>						
Operating Current $I_{op}$	A	$\leq 120$	$\leq 65$	$\leq 88$	$\leq 105$	$\leq 120$
Threshold Current $I_{th}$	A	$\leq 20$	$\leq 7$	$\leq 9$	$\leq 7$	$\leq 20$
Operating Voltage $V_{op}$	V	$\leq 2$	$\leq 2$	$\leq 2$	$\leq 2$	$\leq 2$
Slope Efficiency	W/A	$\geq 1.1$	$\geq 1.05$	$\geq 0.95$	$\geq 0.95$	$\geq 1.1$
Power Conversion Efficiency	%	$\geq 50$	$\geq 55$	$\geq 52$	$\geq 52$	$\geq 50$
<b>Thermal Parameters</b>						
Operating Temperature	°C	15~30	15~30	15~30	15~30	15~30
Storage Temperature <sup>5</sup>	°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 $\Omega$ *cm	0.2-0.5	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) –MCC05(structure code) -40(output power) -808(center wavelength).

<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  $< 0.5^\circ$ .

<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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