

High Power Fiber Coupled Diode Laser

MF Series



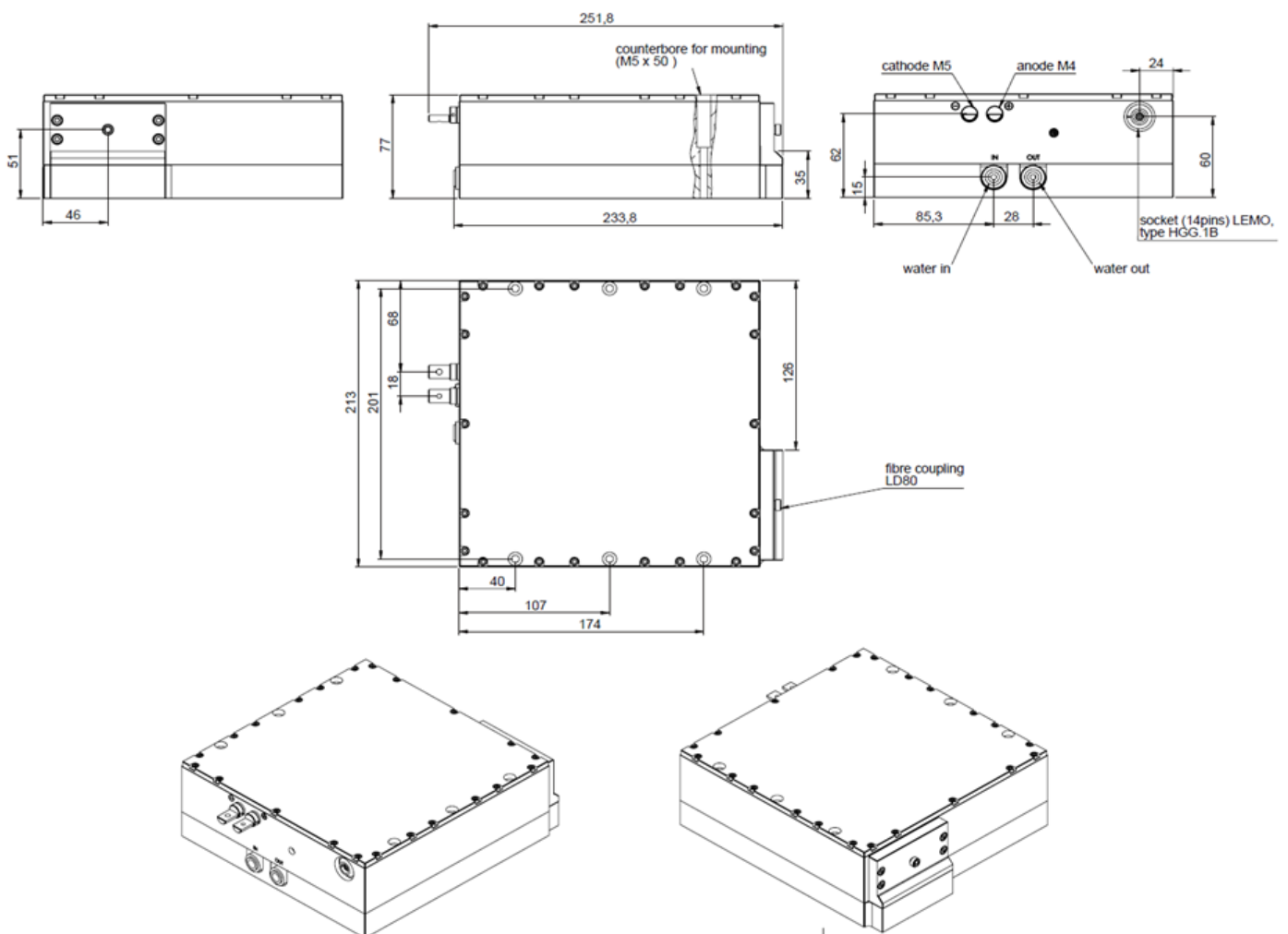
Features

- High brightness
- High E/O efficiency
- Compact housing
- Hermetically sealed housing
- Water Cooling
- Plug and play fiber connector

Applications

- Advanced Manufacturing
- Health
- Information Technology
- Scientific Research

Product Dimensions (mm)



Remark: The structure drawing is for reference only. Please feel free to contact us for any special requirements.

Product Specifications

Product Code	FCS000018	FCS000017	FCS000022	FCS000023
Part No. ¹	FL-MF2094- 200-980-400	FL-MF1798- 350-980-400	FL-MF3012- 400-980-400	FL-MF3013- 500-980-400

Optical Data	Unit	Value	Value	Value	Value
CW-nominal output power	W	200	350	400	500
Centroid wavelength	nm	980	980	980	980
Wavelength tolerance (±)	nm	10	10	10	10
Spectral width (FWHM)	nm	≤20	≤8	≤20	≤20
Wavelength Temp. drift	nm/°C	~ 0.34	~ 0.34	~ 0.34	~ 0.34
Wavelength stabilization		/	/	/	/

Operation Conditions					
Nominal diode heat sink Temp.	°C	25	25	25	25
Diode heat sink operation Temp. ²	°C	+15 ... +30	+15 ... +30	+15 ... +30	+15 ... +30
Minimum heat sink capacity	W	480	800	1000	1230
Chiller flow capacity	L/min	5	5	5	5
Water pressure	bar	4	4	4	4

Electrical Data					
Max. operation current start of life	A	≤62	≤67	≤80	≤80
Max. operation current end of life	A	≤75	≤80	≤96	≤96
Typical threshold current	A	≤6	≤6	≤8	≤8
Typical operation voltage	V	≤10	≤16	≤16	≤20
Typical slope	W/A	≥3.8	≥6.4	≥6.5	≥8.1
Typical E/O efficiency	%	≥39	≥39	≥40	≥40

Fiber connection					
Fiber included		/	/	/	/
Fiber core diameter	µm	400	400	400	400
Numerical aperture		0.22	0.22	0.22	0.22
Fiber optic connector		LD80	LD80	LD80	LD80

Package					
Dimensions	mm ³	251.8×213×77	251.8×213×77	251.8×213×77	251.8×213×77
Weight basic package	kg	7	7	7	7
Storage Temp.	°C	-20 ... +60	-20 ... +60	-20 ... +60	-20 ... +60

Additional Features					
Temp. sensors		NTC & Pt100	NTC & Pt100	NTC & Pt100	NTC & Pt100
Monitor diode (driver: 5V)		Output signal: 0...2.5V	Output signal: 0...2.5V	Output signal: 0...2.5V	Output signal: 0...2.5V
Pilot beam (driver: 5V, 40mA)		>0.7mW, 635±20nm	>0.7mW, 635±20nm	>0.7mW, 635±20nm	>0.7mW, 635±20nm
High reflection bandwidth (>99% S&P polarized)	nm	1030 ... 1130	/	/	/

Measurement					
Fiber		non AR coated, 400µm	non AR coated, 400µm	non AR coated, 400µm	non AR coated, 400µm
Diode heat sink Temp.	°C	25	25	25	25

¹ Part No. = Brand Code - Series - Power - Centroid Wavelength - Fiber Core Diameter.

² Operation beyond recommended temperature may cause lifetime reduction or even damage to the product.



Product Specifications

Product Code	FCS000020		FCS000019		FCS000021	
Part No. ¹	FL-MF3004-250-808-400		FL-MF2151-400-808-400		FL-MF3005-400-800-400	
Optical Data	Unit	Value	Value	Value	Value	Value
CW-nominal output power	W	250	400	400	400	400
Centroid wavelength	nm	808	808	808	808	808
Wavelength tolerance (±)	nm	10	3	3	10	10
Spectral width (FWHM)	nm	≤20	≤5	≤5	≤20	≤20
Wavelength Temp. drift	nm/°C	~ 0.28	~ 0.28	~ 0.28	~ 0.28	~ 0.28
Wavelength stabilization		/	/	/	/	/
Operation Conditions						
Nominal diode heat sink Temp.	°C	25	25	25	25	25
Diode heat sink operation Temp. ²	°C	+15 ... +30	+15 ... +30	+15 ... +30	+15 ... +30	+15 ... +30
Minimum heat sink capacity	W	590	1000	1000	1000	1000
Chiller flow capacity	L/min	5	5	5	5	5
Water pressure	bar	4	4	4	4	4
Electrical Data						
Max. operation current start of life	A	≤65	≤65	≤65	≤65	≤65
Max. operation current end of life	A	≤78	≤78	≤78	≤78	≤78
Typical threshold current	A	≤8	≤8	≤8	≤8	≤8
Typical operation voltage	V	≤12	≤20	≤20	≤20	≤20
Typical slope	W/A	≥4.8	≥7.3	≥7.3	≥7.7	≥7.7
Typical E/O efficiency	%	≥39	≥37	≥37	≥37	≥37
Fiber connection						
Fiber included		/	/	/	/	/
Fiber core diameter	µm	400	400	400	400	400
Numerical aperture		0.22	0.22	0.22	0.22	0.22
Fiber optic connector		LD80	LD80	LD80	LD80	LD80
Package						
Dimensions	mm ³	251.8×213×77	251.8×213×77	251.8×213×77	251.8×213×77	251.8×213×77
Weight basic package	kg	7	7	7	7	7
Storage Temp.	°C	-20 ... +60	-20 ... +60	-20 ... +60	-20 ... +60	-20 ... +60
Additional Features						
Temp. sensors		NTC & Pt100	NTC & Pt100	NTC & Pt100	NTC & Pt100	NTC & Pt100
Monitor diode (driver: 5V)		Output signal: 0...2.5V	Output signal: 0...2.5V	Output signal: 0...2.5V	Output signal: 0...2.5V	Output signal: 0...2.5V
Pilot beam (driver: 5V, 40mA)		>0.7mW, 635±20nm	>0.7mW, 635±20nm	>0.7mW, 635±20nm	>0.7mW, 635±20nm	>0.7mW, 635±20nm
High reflection bandwidth (>99% S&P polarized)	nm	/	1030 ... 1130	1030 ... 1130	/	/
Measurement						
Fiber		non AR coated, 400µm	non AR coated, 400µm	non AR coated, 400µm	non AR coated, 400µm	non AR coated, 400µm
Diode heat sink Temp,	°C	25	25	25	25	25

¹Part No. = Brand Code - Series - Power - Centroid Wavelength - Fiber Core Diameter.

²Operation beyond recommended temperature may cause lifetime reduction or even damage to the product.

