

High Power Fiber Coupled Diode Laser

LM Series (Basic A)



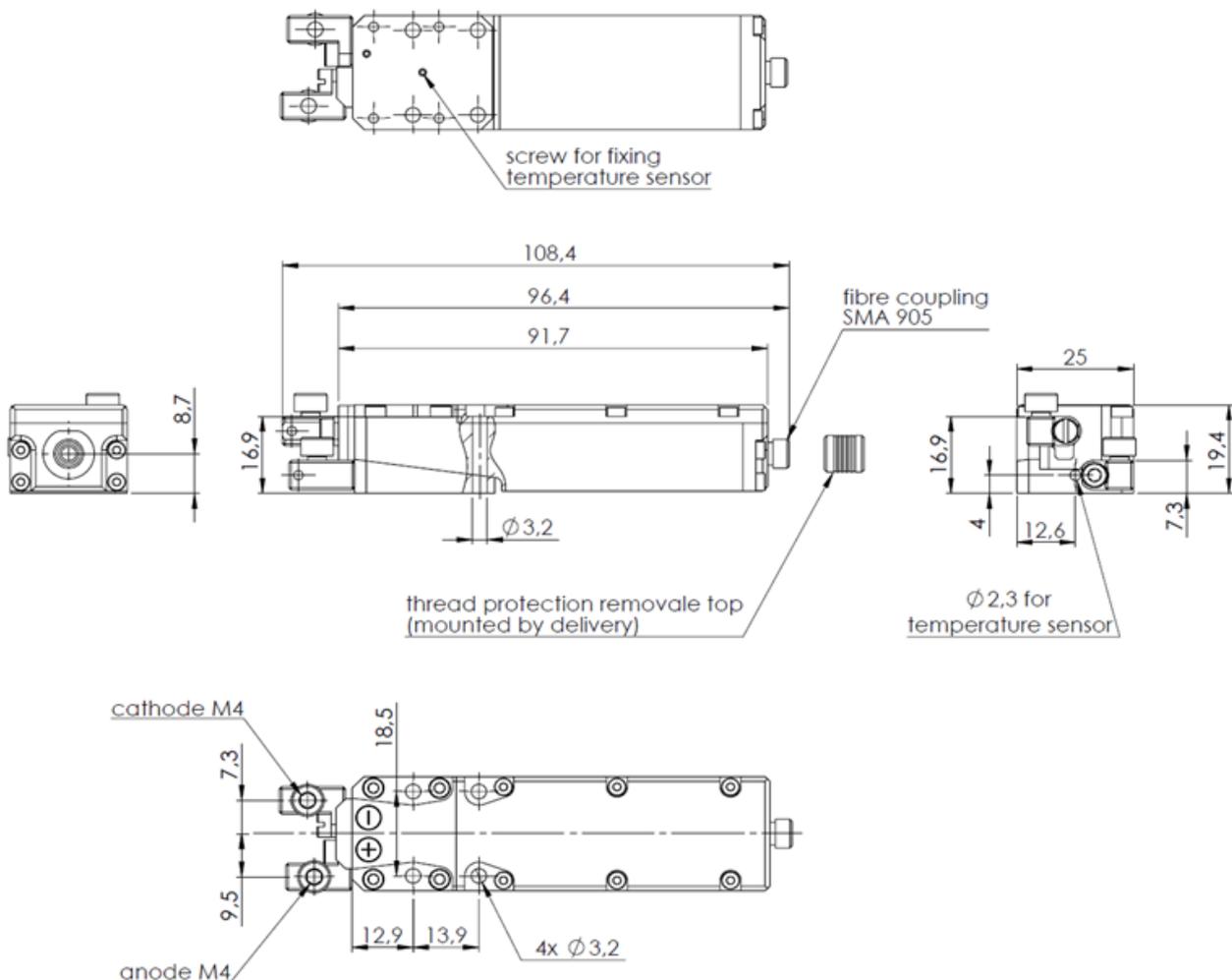
Features

- High brightness
- High E/O efficiency
- Compact housing
- Hermetically sealed housing
- Conduction 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		FCS000012	FCS000010 ²	FCS000007 ²
Part No. ¹		FL-LM2024-32-808-400	FL-LM2004-35-976-200	FL-LM1889-40-981-200
Optical Data	Unit	Value	Value	Value
CW-nominal output power	W	32	35	40
Centroid wavelength	nm	808	976	981
Wavelength tolerance (±)	nm	3	1	1
Spectral width (FWHM)	nm	≤4	≤1	≤1
Wavelength Temp. drift	nm/°C	~0.28	~0.01	~0.01
Wavelength stabilization		/	Yes (spectral efficiency ≥ 90%)	Yes (spectral efficiency ≥ 90%)
Operation Conditions				
Nominal diode heat sink Temp.	°C	25	25	25
Diode heat sink operation Temp. ³	°C	+15 ... +30	+15 ... +30	+15 ... +30
Minimum heat sink capacity	W	60	90	100
Electrical Data				
Max. operation current start of life	A	≤43	≤58	≤63
Max. operation current end of life	A	≤52	≤70	≤76
Typical threshold current	A	≤8	≤8	≤8
Typical operation voltage	V	≤2	≤2	≤2
Typical slope	W/A	≥0.9	≥0.7	≥0.7
Typical E/O efficiency	%	≥44	≥39	≥38
Fiber connection				
Fiber included		/	/	Yes (fixed)
Fiber core diameter	µm	400	200	200
Numerical aperture		0.22	0.22	0.22
Fiber optic connector ⁴		SMA905	SMA905	SMA905(SH/SH)
Fiber length	m	/	/	0.05±0.1
Package				
Dimensions	mm ³	108.4×25×17	108.4×25×17	108.4×25×17
Weight basic package	kg	0.3	0.3	0.3
Storage Temp.	°C	-20 ... +60	-20 ... +60	-20 ... +60
Additional Features				
High reflection bandwidth (> 99% S&P polarized)	nm	1030 ... 1130	1030 ... 1130	1030 ... 1130
Temp. sensors		NTC & Pt100	NTC & Pt100	NTC & Pt100
Accessories package ⁵		Yes	Yes	Yes
Measurement				
Fiber		non AR coated, 400µm	non AR coated, 200µm	non AR coated, 200µm
Diode heat sink Temp.	°C	25	25	25

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

² Typical customization of products.

³ Operation beyond recommended temperature may cause lifetime reduction or even damage to the product.

⁴ SH: air gap.

⁵ In the accessory package, the positive and negative electrodes of the "diode" need to be reversely connected to the negative and positive electrodes of the module; The insulation and thermal conductivity of the "carbon film" are very important to the installation and use of the laser, as the housing of the laser is connected to its anode.



Product Specifications

Product Code	FCS000016 ²		FCS000006 ²	
Part No. ¹	FL-LM6001-20-981-200		FL-LM1713-20-981-200	
Optical Data	Unit	Value	Value	Value
CW-nominal output power	W	20		20
Centroid wavelength	nm	981		981
Wavelength tolerance (±)	nm	1		1
Spectral width (FWHM)	nm	≤1		≤1
Wavelength Temp. drift	nm/°C	~0.01		~0.01
Wavelength stabilization		Yes (spectral efficiency≥90%)		Yes (spectral efficiency≥90%)
Operation Conditions				
Nominal diode heat sink Temp.	°C	25		28
Diode heat sink operation Temp. ³	°C	+15 ... +30		+15 ... +30
Minimum heat sink capacity	W	70		70
Electrical Data				
Max. operation current start of life	A	≤40		≤35
Max. operation current end of life	A	≤50		≤42
Typical threshold current	A	≤6		≤6
Typical operation voltage	V	≤2		≤2
Typical slope	W/A	≥0.8		≥0.8
Typical E/O efficiency	%	≥33		≥33
Fiber connection				
Fiber included		/		Yes (fixed)
Fiber core diameter	μm	200		200
Numerical aperture		0.22		0.22
Fiber optic connector ⁴		SMA905		SMA905(SH/SH)
Fiber Length		/		0.05±0.1
Package				
Dimensions	mm ³	108.4×25×17		108.4×25×17
Weight basic package	kg	0.3		0.3
Storage Temp.	°C	-20 ... +60		-20 ... +60
Additional Features				
High reflection bandwidth (> 99% S&P polarized)	nm	1030 ... 1130		/
Temp. sensors		NTC & Pt100		NTC & Pt100
Accessories package ⁵		Yes		Yes
Measurement				
Fiber		non AR coated, 200μm		non AR coated, 200μm
Diode heat sink Temp.	°C	25		28

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

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