

High Power Fiber Coupled Diode Laser

FCMSE58 Series



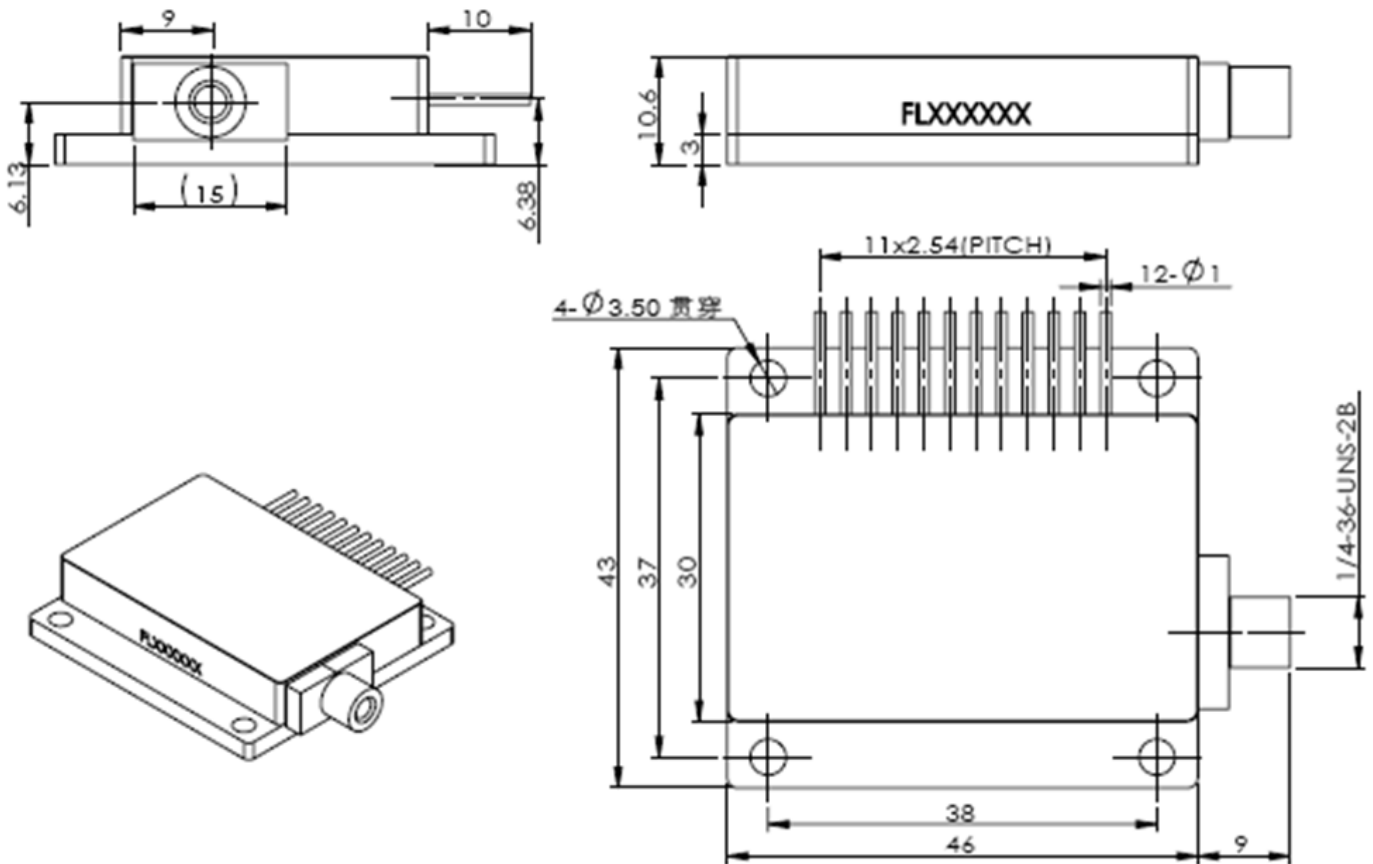
Features

- High brightness
- High power
- Compact housing
- Hermetically sealed housing
- Conduction Cooling

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	FCE000018		FCE000013 ²	
Part No. ¹	FL-FCMSE58-25-808-200		FL-FCMSE58-8(808)/15(1064)-200	
Optical Data	Unit	Value		
CW-nominal output power	W	25	8	15
Centroid wavelength	nm	808	808	1064
Wavelength tolerance (±)	nm	3	5	10
Spectral width (FWHM)	nm	≤4	/	/
Wavelength Temp. drift	nm/°C	~0.28	~0.34	~0.28
Feedback Protection (1040nm-1100nm)	dB	/	/	/
Fiber connection				
Fiber included		Yes (FP03)	/	/
Fiber core diameter	µm	200	200	200
Numerical aperture		0.22	0.22	0.22
Fiber optic connector ³		SMA905 (SH/SF)	SMA905 (SH/SF)	SMA905 (SH/SF)
Fiber length	m	1.5±0.1	/	/
Fixed fiber/Detachable fiber		Detachable fiber	/	/
Operation Conditions				
Nominal diode heat sink Temp.	°C	25	25	25
Diode heat sink operation Temp. ⁴	°C	+20 ... +30	+20 ... +30	+20 ... +30
Minimum heat sink capacity	W	75	75	75
Electrical Data				
Max. operation current start of life	A	≤9.2	≤10.5	≤13.5
Typical threshold current	A	≤1.8	≤1.8	≤1.2
Typical operation voltage	V	≤8	≤2.1	≤4
Typical slope	W/A	≥2.8	≥0.8	≥0.55
Typical E/O efficiency	%	≥40	≥35	≥28
Package				
Dimensions	mm ³	55×43×10.6	55×43×10.6	55×43×10.6
Weight basic package	g	110	110	110
Storage Temp.	°C	-20 ... +80	-20 ... +80	-20 ... +80
Additional Features				
Temp. sensors		NTC(10kΩ@25°C)	NTC(10kΩ@25°C)	NTC(10kΩ@25°C)
Monitor diode (driver: 9V)	mA	/	/	0 ... 15
Pilot beam (driver: 5V, < 30mA)		/	> 2mW, 670±20nm	/
Fiber detection sensor		/	/	/
Measurement				
Fiber		AR coated, 200µm	AR coated, 200µm	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 SF: flat end, SH: air gap.

⁴ Operation beyond recommended temperature may cause lifetime reduction or even damage to the product.



Product Specifications

Product Code		FCE000016	FCE000023	FCE000035 ²
Part No. ¹		FL-FCMSE58-16-976-200	FL-FCMSE58-30-976-200	FL-FCMSE58-16-980-200
Optical Data		Unit	Value	
CW-nominal output power	W	16	30	16
Centroid wavelength	nm	976	976	980
Wavelength tolerance (±)	nm	10	5	15
Spectral width (FWHM)	nm	≤5	≤6	/
Wavelength Temp. drift	nm/°C	~0.34	~0.34	~0.34
Feedback Protection (1040nm-1100nm)	dB	/	/	/
Fiber connection				
Fiber included		Yes(FP03)	Yes(FP03)	Yes(FP03)
Fiber core diameter	µm	200	200	200
Numerical aperture		0.22	0.22	0.22
Fiber optic connector ³		SMA905(SH/SF)	SMA905(SH/SF)	SMA905(SH/SF)
Fiber length	m	1.5±0.1	1.5±0.1	1.5±0.1
Fixed fiber/Detachable fiber		Detachable fiber	Detachable fiber	Detachable fiber
Operation Conditions				
Nominal diode heat sink Temp.	°C	25	25	25
Diode heat sink operation Temp. ⁴	°C	+20 ... +30	+20 ... +30	+20 ... +30
Minimum heat sink capacity	W	75	75	75
Electrical Data				
Max. operation current start of life	A	≤10	≤9.5	≤10
Typical threshold current	A	≤0.7	≤0.7	≤0.7
Typical operation voltage	V	≤4	≤8	≤4
Typical slope	W/A	≥0.55	≥3.3	≥0.75
Typical E/O efficiency	%	≥43	≥47	≥45
Package				
Dimensions	mm ³	55×43×10.6	55×43×10.6	55×43×10.6
Weight basic package	g	110	110	110
Storage Temp.	°C	-20 ... +80	-20 ... +80	-20 ... +80
Additional Features				
Temp. sensors		NTC(10kΩ@25°C)	NTC(10kΩ@25°C)	NTC(10kΩ@25°C)
Monitor diode (driver: 9V)	mA	0 ... 15	0 ... 15	0 ... 15
Pilot beam (driver: 5V, < 30mA)		> 2mW, 670±20nm	> 2mW, 670±20nm	> 2mW, 670±20nm
Fiber detection sensor		Yes	Yes	Yes
Measurement				
Fiber		AR coated, 200µm	AR coated, 200µm	AR coated, 200µm
Diode heat sink Temp.	°C	25	25	25

¹ Part No. = Brand Code - Series - Power - Centroid Wavelength - Fiber core diameter.

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