

# **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 <sup>2</sup> FL-FCMSE58-8(808)/15(1064)-200	
Part No. <sup>1</sup>		FL-FCMSE58-25-808-200		
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	1 1	
Wavelength Temp. drift	nm/°C	~0.28	~0.34 ~0.28	
Feedback Protection (1040nm-1100nm)	dB	1	1	
Fiber connection				
Fiber included		Yes(FP03)	1	
Fiber core diameter	μm	200	200	
Numerical aperture		0.22	0.22	
Fiber optic connector <sup>3</sup>		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	
Diode heat sink operation Temp.4	°C	+20 +30	+20 +30	
Minimum heat sink capacity	W	75	75	
Electrical Data				
Max. operation current start of life	А	≤9.2	≤10.5 ≤13.5	
Typical threshold current	А	≤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 <sup>3</sup>	55×43×10.6	55×43×10.6	
Weight basic package	g	110	110	
Storage Temp.	°C	-20 +80	-20 +80	
Additional Features				
Temp. sensors		NTC(10kΩ@25°C)	NTC(10kΩ@25°C)	
Monitor diode (driver: 9V)	mA	1	0 15	
Pilot beam (driver: 5V, < 30mA)		1	> 2mW, 670±20nm	
Fiber detection sensor		I	1	
Measurement				
Fiber		AR coated, 200µm	AR coated, 200µm	
Diode heat sink Temp.	°C	25	25	

<sup>1</sup> Part No. = Brand Code - Series - Power - Centroid Wavelength - Fiber core diameter.

<sup>2</sup> Typical customization of products.

<sup>3</sup> SF: flat end, SH: air gap.

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





## **Product Specifications**

FCE000035 <sup>2</sup>	FCE000023	FCE000016		Product Code
FL-FCMSE58-16-980-200	FL-FCMSE58-30-976-200	FL-FCMSE58-16-976-200		Part No. <sup>1</sup>
		Value	Unit	Optical Data
16	30	16	W	CW-nominal output power
980	976	976	nm	Centroid wavelength
15	5	10	nm	Wavelength tolerance (±)
1	≤6	≤5	nm	Spectral width (FWHM)
~0.34	~0.34	~0.34	nm/°C	Wavelength Temp. drift
1	/	1	dB	Feedback Protection (1040nm-1100nm)
				Fiber connection
Yes(FP03)	Yes(FP03)	Yes(FP03)		Fiber included
200	200	200	μm	Fiber core diameter
0.22	0.22	0.22		Numerical aperture
SMA905(SH/SF)	SMA905(SH/SF)	SMA905(SH/SF)		Fiber optic connector <sup>3</sup>
1.5±0.1	1.5±0.1	1.5±0.1	m	Fiber length
Detachable fiber	Detachable fiber	Detachable fiber		Fixed fiber/Detachable fiber
				Operation Conditions
25	25	25	°C	Nominal diode heat sink Temp.
+20 +30	+20 +30	+20 +30	°C	Diode heat sink operation Temp.4
75	75	75	W	Minimum heat sink capacity
				Electrical Data
≤10	≤9.5	≤10	А	Max. operation current start of life
≤0.7	≤0.7	≤0.7	А	Typical threshold current
≤4	≤8	≤4	V	Typical operation voltage
≥0.75	≥3.3	≥0.55	W/A	Typical slope
≥45	≥47	≥43	%	Typical E/O efficiency
				Package
55×43×10.6	55×43×10.6	55×43×10.6	mm³	Dimensions
110	110	110	g	Weight basic package
-20 +80	-20 +80	-20 +80	°C	Storage Temp.
				Additional Features
NTC(10kΩ@25°C)	NTC(10kΩ@25°C)	NTC(10kΩ@25°C)		Temp. sensors
0 15	0 15	0 15	mA	Monitor diode (driver: 9V)
> 2mW, 670±20nm	> 2mW, 670±20nm	> 2mW, 670±20nm		Pilot beam (driver: 5V, < 30mA)
Yes	Yes	Yes		Fiber detection sensor
				Measurement
AR coated, 200µm	AR coated, 200µm	AR coated, 200µm		Fiber
25	25	25	°C	Diode heat sink Temp.

<sup>1</sup>Part No. = Brand Code - Series - Power - Centroid Wavelength - Fiber core diameter.

<sup>2</sup> Typical customization of products.

<sup>3</sup> SF: flat end, SH: air gap.

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



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