

# High Power Fiber Coupled Diode Laser

## FCMSE58 Series



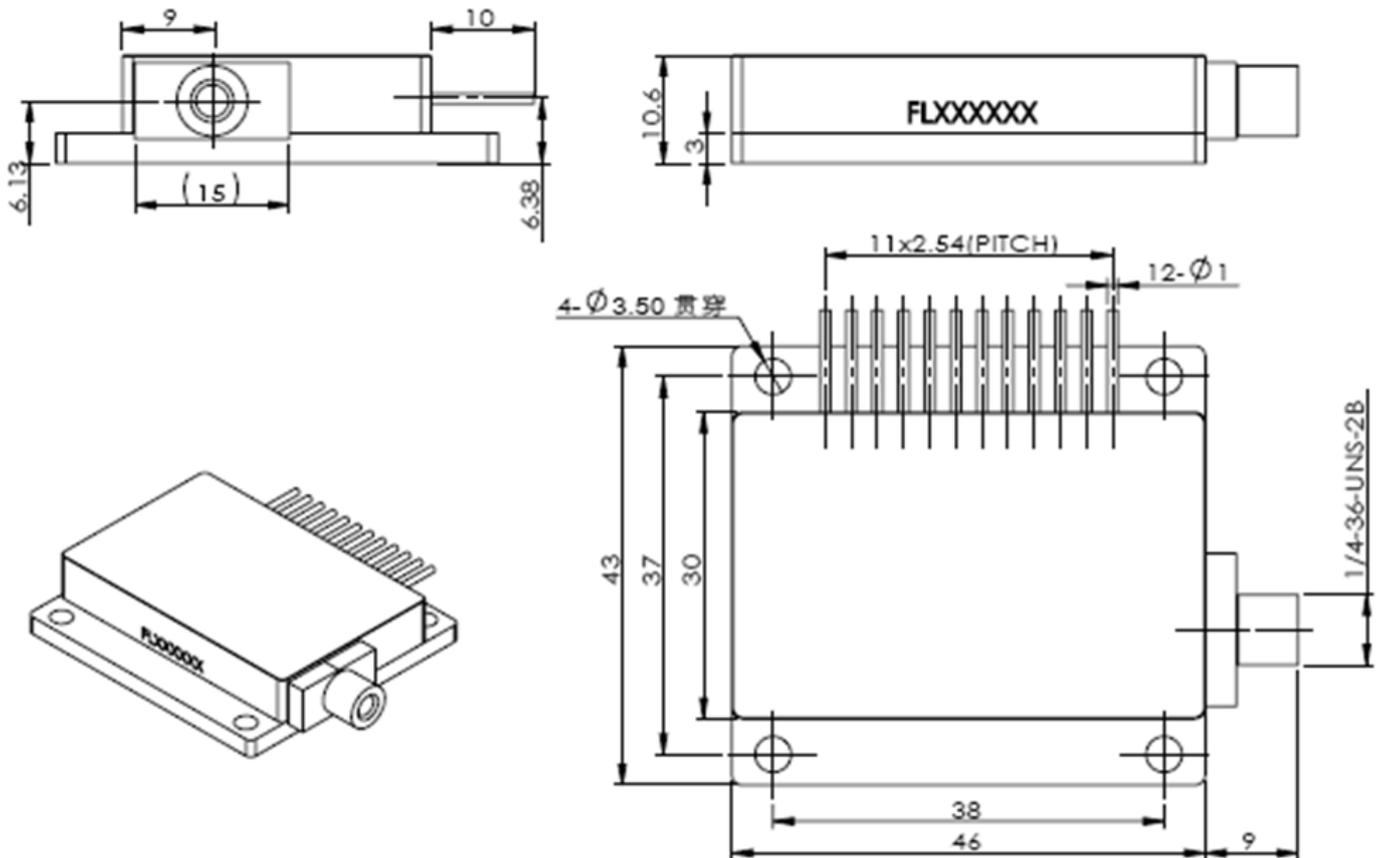
### Features

- 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		FCS000013 <sup>2</sup>	
Part No. <sup>1</sup>	FL-FCMSE58-25-808-200		FL-FCMSE58-8(808)/15(1064)-200	
<b>Optical Data</b>				
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	/	/	/
<b>Fiber connection</b>				
Fiber included		Yes(FP03)		/
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		/
<b>Operation Conditions</b>				
Nominal diode heat sink Temp.	°C	25		25
Diode heat sink operation Temp. <sup>4</sup>	°C	+20 ... +30		+20 ... +30
Minimum heat sink capacity	W	75		75
<b>Electrical Data</b>				
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
<b>Package</b>				
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
<b>Additional Features</b>				
Temp. sensors		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		/		/
<b>Measurement</b>				
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

Product Code	FCE000016		FCE000023		FCE000035 <sup>2</sup>	
Part No. <sup>1</sup>	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 <sup>3</sup>		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. <sup>4</sup>	°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 <sup>3</sup>	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		

<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.

