

High Power Fiber Coupled Diode Laser FCMSE58 Series



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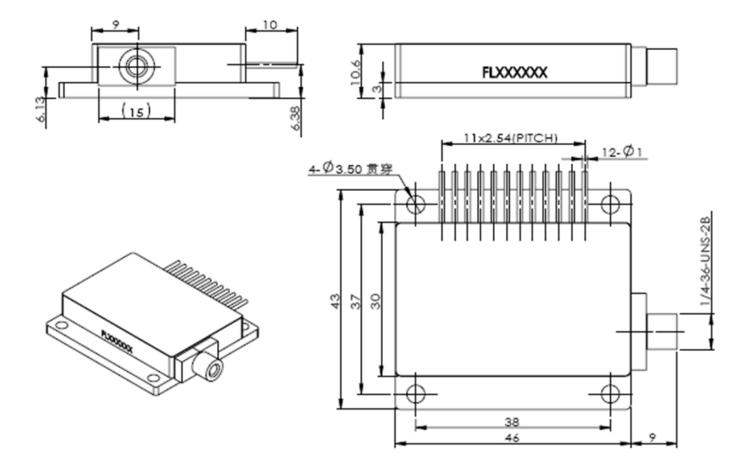
Features

- 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 | FCE300035 ² | FCS300039 ² |
|----------------------------------------------|-------|-----------------------|------------------------|--------------------------------|
| Part No. ¹ | | FL-FCMSE58-25-808-200 | FL-FCMSE58-25-808-400 | FL-FCMSE58-8(808)/15(1064)-200 |
| Optical Data | Unit | Value | | |
| CW-nominal output power | W | 25 | 25 | 8 15 |
| Centroid wavelength | nm | 808 | 808 | 808 1064 |
| Wavelength tolerance (±) | nm | 3 | 10 | 10 10 |
| Spectral width (FWHM) | nm | ≤4 | 1 | 1 1 |
| Wavelength Temp. drift | nm/°C | ~0.28 | ~0.28 | ~0.34 ~0.28 |
| Feedback Protection (1040nm-1100nm) | dB | 1 | 1 | 1 |
| Fiber connection | | | | |
| Fiber included | | Yes | Yes | Yes |
| Fiber core diameter | μm | 200 | 400 | 200 |
| Numerical aperture | | 0.22 | 0.22 | 0.22 |
| Fiber optic connector | | SMA905 | SMA905 | SMA905 |
| Fiber length | m | 1.5±0.1 | 3.0±0.2 | 1.5±0.1 |
| Operation Conditions | | | | |
| Nominal diode heat sink Temp. | °C | 25 | 25 | 25 |
| Diode heat sink operation Temp. ³ | °C | +20 +30 | +20 +30 | +20 +30 |
| Minimum heat sink capacity | W | 75 | 75 | 75 |
| Electrical Data | | | | |
| Max. operation current start of life | А | 9.2 | 9.2 | 10.5 13.5 |
| Typical threshold current | A | 1.8 | 1.8 | 1.8 1.2 |
| Typical operation voltage | V | 8 | 8 | 2.1 4 |
| Typical slope | W/A | ≥2.8 | ≥2.8 | ≥0.8 ≥0.55 |
| Typical E/O efficiency | % | ≥40 | ≥40 | ≥35 ≥28 |
| Package | | | | |
| Dimensions | mm³ | 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 | 1 | 1 | 0 15 |
| Pilot beam (driver: 5V, < 30mA) | | / | 1 | > 2mW, 670±20nm |
| Fiber detection sensor | | 1 | / | 1 |
| Measurement | | | | |
| Fiber | | AR coated, 200µm | AR coated, 400µm | AR coated, 200µm |
| Diode heat sink Temp. | °C | 25 | 25 | 25 |

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

 $^{\rm 2}$ Typical customization of products.

³ 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 | 25 |
| Centroid wavelength | nm | 976 | 976 | 980 |
| Wavelength tolerance (±) | nm | 10 | 5 | 15 |
| Spectral width (FWHM) | nm | ≤5 | ≤6 | 1 |
| Wavelength Temp. drift | nm/°C | ~0.34 | ~0.34 | ~0.34 |
| Feedback Protection (1040nm-1100nm) | dB | 1 | 1 | 1 |
| Fiber connection | | | | |
| Fiber included | | Yes | Yes | Yes |
| Fiber core diameter | μm | 200 | 200 | 200 |
| Numerical aperture | | 0.22 | 0.22 | 0.22 |
| Fiber optic connector | | SMA905 | SMA905 | SMA905 |
| Fiber length | m | 1.5±0.1 | 1.5±0.1 | 1.5±0.1 |
| Operation Conditions | | | | |
| Nominal diode heat sink Temp. | °C | 25 | 25 | 25 |
| Diode heat sink operation Temp. ³ | °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 | А | 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 | mm³ | 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 |

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

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