



# **High Power Fiber Coupled Diode Laser**

# FCMSE55 Series



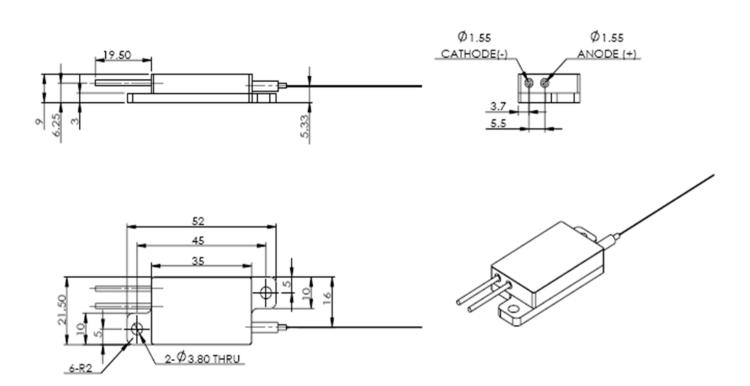
#### **Features**

- 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                                 |       | FCE000004        | FCE000034 <sup>2</sup> | FCE000036 <sup>2</sup> | FCE000010 <sup>2</sup> |
|--|-------|------------------|------------------------|------------------------|------------------------|
| Part No. 1                                   |       | FL-FCMSE55-      | FL-FCMSE55-            | FL-FCMSE55-            | FL-FCMSE55-            |
|  |       | 15-808-200       | 20-915-200             | 25-940-105             | 25-976-105             |
| Optical Data                                 | Unit  | Value            |                        |                        |                        |
| CW-nominal output power                      | W     | 15               | 20                     | 25                     | 25                     |
| Centroid wavelength                          | nm    | 808              | 915                    | 940                    | 976                    |
| Wavelength tolerance (±)                     | nm    | 3                | 10                     | 3                      | 10                     |
| Spectral width (FWHM)                        | nm    | ≤4               | ≤6                     | ≤4                     | ≤6                     |
| Wavelength Temp. drift                       | nm/°C | ~ 0.28           | ~ 0.32                 | ~ 0.33                 | ~ 0.34                 |
| Feedback Protection (1040nm-1100nm)          | dB    | 1                | 30                     | 30                     | 30                     |
| Fiber connection                             |       |                  |                        |                        |                        |
| Fiber included                               |       | Yes              | Yes                    | Yes                    | Yes                    |
| Fiber core diameter                          | μm    | 200              | 200                    | 105                    | 105                    |
| Numerical aperture                           |       | 0.22             | 0.22                   | 0.22                   | 0.22                   |
| Fiber optic connector                        |       | SMA905           | SMA905                 | SMA905                 | SMA905                 |
| Fiber length                                 | m     | 1.5±0.1          | 1.5±0.1                | 1.5±0.1                | 1.5±0.1                |
| Operation Conditions                         |       |                  |                        |                        |                        |
| Nominal diode heat sink Temp.                | °C    | 25               | 25                     | 25                     | 25                     |
| Diode heat sink operation Temp. <sup>3</sup> | °C    | +20 +30          | +20 +30                | +20 +30                | +20 +30                |
| Minimum heat sink capacity                   | W     | 50               | 60                     | 60                     | 60                     |
| Electrical Data                              |       |                  |                        |                        |                        |
| Max. operation current start of life         | А     | 7.3              | 10.5                   | 10.5                   | 11                     |
| Typical threshold current                    | А     | 1.8              | 0.7                    | 0.7                    | 0.7                    |
| Typical operation voltage                    | V     | 6                | 6                      | 6                      | 6                      |
| Typical slope                                | W/A   | ≥2.0             | ≥2.3                   | ≥2.3                   | ≥2.0                   |
| Typical E/O efficiency                       | %     | ≥38              | ≥45                    | ≥45                    | ≥43                    |
| Package                                      |       |                  |                        |                        |                        |
| Dimensions                                   | mm³   | 63×21.5×9        | 63×21.5×9              | 63×21.5×9              | 63×21.5×9              |
| Weight basic package                         | g     | 45               | 45                     | 45                     | 45                     |
| Storage Temp.                                | °C    | -20 +80          | -20 +80                | -20 +80                | -20 +80                |
| Measurement                                  |       |                  |                        |                        |                        |
| Fiber  |       | AR coated, 200µm | AR coated, 200µm       | AR coated, 105µm       | AR coated, 105µm       |
| Diode heat sink Temp.                        | °C    | 25               | 25                     | 25                     | 25                     |

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

 $<sup>^3</sup>$ Operation beyond recommended temperature may cause lifetime reduction or even damage to the product.



<sup>&</sup>lt;sup>2</sup> Typical customization of products.