

# FIBER-COUPLED SINGLE BAR DIODE LASER MODULE

**808 nm, 40 W, 400  $\mu\text{m}$   $\varnothing$ ,  
Conduction-Cooled, CW**

Our fiber-coupled single bar modules deliver outstanding optical performance across a broad wavelength range from 630 nm to 2  $\mu\text{m}$ , supporting output powers up to 50 W continuous wave (CW) and 250 W quasi-continuous wave (QCW). Designed for high-demand environments, these modules combine reliability, efficiency, and configurability in a compact footprint. Available with fiber core diameters starting from 100  $\mu\text{m}$ , the modules offer a wide range of customizable features including line narrowing, wavelength stabilization, and integrated monitoring options for real-time performance feedback and control.



## FEATURES

- High coupling efficiency
- High brightness
- Sealed housing
- Standard fiber coupling (HP-SMA) for 400  $\mu\text{m}$  NA 0.22

## INCLUDING

- Back reflection filter for 1.06  $\mu\text{m}$  laser light

## Device Specification

| Optical Parameters <sup>1</sup>                   |  | SS2.1      |
|---------------------------------------------------|--|------------|
| Center Wavelength Range <sup>3</sup> (nm)         |  | 808        |
| Center Wavelength Tolerance <sup>3</sup> (nm)     |  | ±3         |
| Output Power <sup>2</sup> (W)                     |  | 40         |
| Operating Condition                               |  | CW         |
| Spectral Width (FWHM) (nm)                        |  | ≤4         |
| Slope Efficiency (W/A)                            |  | ≥0.85      |
| Wavelength Temp. Coefficient (nm/°C)              |  | ~0.27      |
| Fiber Parameters                                  |  |            |
| Fiber Connector                                   |  | SMA        |
| Fiber Core Diameter (μm)                          |  | 400        |
| Fiber Cladding Diameter (μm)                      |  |            |
| Fiber Coating Diameter (μm)                       |  |            |
| Fiber Loose Tubing Diameter (mm)                  |  |            |
| Numerical Aperture (NA)                           |  | 0.22       |
| Fiber Length (m)                                  |  |            |
| Fiber Termination                                 |  |            |
| Electrical Parameters <sup>1</sup>                |  |            |
| Power Conversion Efficiency (%)                   |  | ≥46        |
| Threshold Current ( $I_{TH}$ ) (A)                |  | ≤11        |
| Operating Current ( $I_{OP}$ ) (A)                |  | ≤52        |
| Operating Voltage ( $V_{OP}$ ) (V)                |  | ≤1.9       |
| Duty Cycle <sup>3</sup> (%)                       |  | -          |
| Pulse Length <sup>3</sup> (μsec)                  |  | -          |
| Thermal Parameters <sup>1</sup>                   |  |            |
| Operating Temperature Range <sup>2,3,4</sup> (°C) |  | +20 to +30 |
| Storage Temperature Range <sup>3,4</sup> (°C)     |  | 0 to +55   |
| Recommended Heatsink Capacity (W)                 |  | ≥70        |
| Part Number(s)                                    |  |            |
| M1F4S22-808.3-40C-SS2.103                         |  | 2221328    |

### Notes:

1. Data at 25°C cold plate temperature.
2. Reduced lifetime if used above nominal operating conditions.
3. Others available upon request.
4. A non-condensing environment is required for storage and operation below the ambient dew point.

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## Package Dimension

