

FIBER-COUPLED SINGLE BAR DIODE LASER MODULE

**675 nm, 10 W, 400 μm $\varnothing$,
Conduction-Cooled, CW, Fully-Featured**

Our fiber-coupled single bar modules deliver outstanding optical performance across a broad wavelength range from 630 nm to 2 μm , 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 μm , 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 μm NA 0.22

INCLUDING

- NTC temperature sensor
- Monitor photo diode
- Pilot beam (635 nm, 2 mW)
- Exchangeable blast shield
- Fiber plug control
- Polarization scrambler

Device Specification

Optical Parameters ¹		SS5.2
Center Wavelength Range ³ (nm)		675
Center Wavelength Tolerance ³ (nm)		±5
Output Power ² (W)		10
Operating Condition		CW
Spectral Width (FWHM) (nm)		≤2
Slope Efficiency (W/A)		≥0.7
Wavelength Temp. Coefficient (nm/°C)		~0.16
Fiber Parameters		
Fiber Connector		SMA
Fiber Core Diameter (μm)		400
Fiber Cladding Diameter (μm)		480
Fiber Coating Diameter (μm)		720
Fiber Loose Tubing Diameter (mm)		5.6
Numerical Aperture (NA)		0.22
Fiber Length (m)		2
Fiber Termination		SMA
Electrical Parameters ¹		
Power Conversion Efficiency (%)		≥26
Threshold Current (I _{TH}) (A)		≤7
Operating Current (I _{OP}) (A)		≤23
Operating Voltage (V _{OP}) (V)		≤2.2
Duty Cycle ³ (%)		-
Pulse Length ³ (μsec)		-
Thermal Parameters ¹		
Operating Temperature Range ^{2,3,4} (°C)		+20 to +30
Storage Temperature Range ^{3,4} (°C)		0 to +55
Recommended Heatsink Capacity (W)		≥70
Part Number(s)		
M1F4S22-675.5-10C-SS5.2M2O1P3T3		100406957

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.

Package Dimension

