

FACTOR SERIES FIBER-COUPLED DIODE LASER MODULE

**808 nm, ≥ 7 W, 200 μm , CW,
Conduction-Cooled, Single Emitter-Based**

The FACTOR Series offers the highest efficiencies and best reliability for pump wavelengths in the range of 808nm, 88x nm, 793 nm and 9xx nm for pumping Nd³⁺, Tm³⁺ and Yb³⁺ doped materials, respectively. It is available between 1 and 22 single emitters, ranging from power levels of a few Watts up to 400 W.



FEATURES

- Robust package
- Hermetically sealed
- Fixed fiber

APPLICATIONS

- Solid state laser pumping
- Materials processing
- Medical
- Direct applications

Device Specification

Optical Parameters ¹		BMU1E
Center Wavelength Range ³ (nm)		808
Center Wavelength Tolerance ³ (nm)		±2.5
Output Power ² (W)		≥7
Operating Condition		CW
Spectral Width (-13db of power) (nm)		typ. 3
Wavelength Locked Output Power Range		-
Slope Efficiency (W/A)		≥0.9
Wavelength Temp. Coefficient (nm/°C)		~0.27
Numerical Aperture (NA)		-
Fiber Parameters ⁵		
Fiber Core Diameter (μm)		200 ±4
Fiber Cladding Diameter (μm)		240 ±3
Fiber Coating Diameter (μm)		315 +20/-10
Fiber Loose Tubing Diameter (mm)		-
Numerical Aperture (NA)		0.22 ±0.02
Fiber Length (m)		≥1.5
Fiber Termination		SMA905 ceramic ferrule
Electrical Parameters ¹		
Power Conversion Efficiency (%)		typ. 45
Threshold Current (I _{TH}) (A)		≤1.3
Operating Current (I _{OP}) (A)		≤9
Operating Voltage (V _{OP}) (V)		≤2.4
Thermal Parameters		
Operating Temperature Range ^{2,3,4} (°C)		+20 to +30
Storage Temperature Range ^{3,4} (°C)		-40 to +85
Recommended Heatsink Capacity (W)		20
Maximum Soldering Temperature for Electrical Leads (°C)		250
Maximum Soldering Time per Lead (s)		10
Mechanical Parameters		
Size (mm ³) [W x D x H]		13.7 x 17.5 x 6.5
Weight (g)		11.5

Part Number(s)	
BMU1E	BMU7-808C-02-R

Notes:

1. Data at 25°C base plate temperature and the use of a thermal interface material rated for a thermal contact resistance of less than 1.0 cm² K/W (0.155 in² K/W).
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.
5. Non-detachable fiber.

FIBER-COUPLED DIODE LASER MODULE

Package Dimension

NOTES:
ALL DIMENSIONS IN MM
GENERAL TOLERANCES: ± 0.2

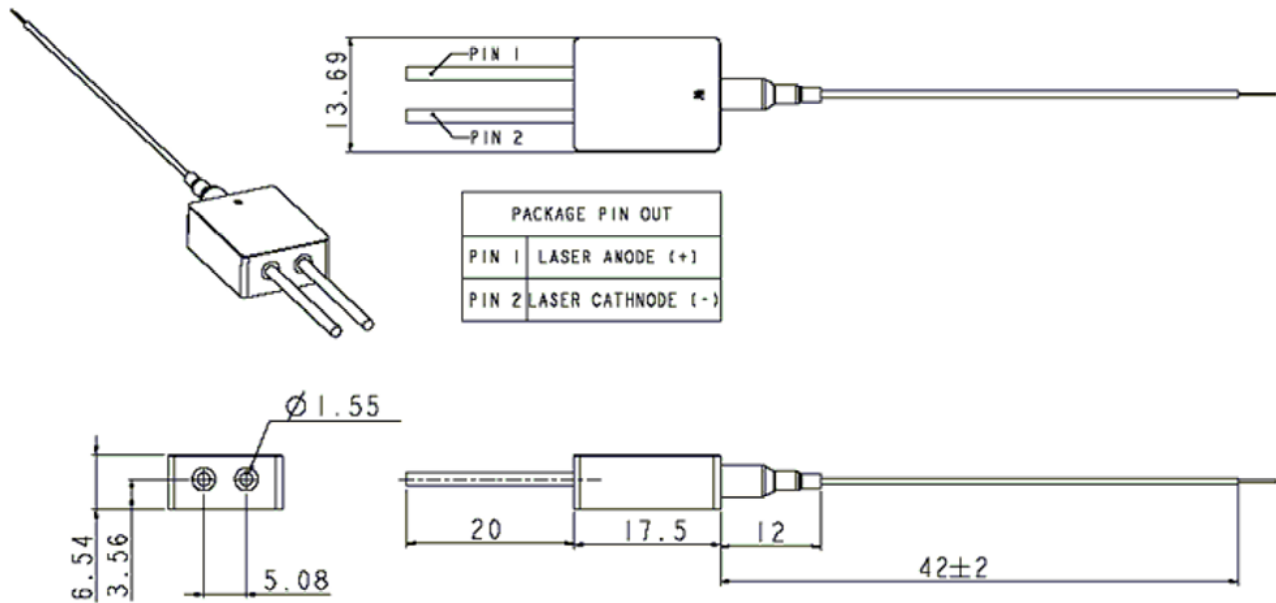


Figure 1 Module shown without protection sleeve and SMA connector (top view). All dimensions are given in mm.

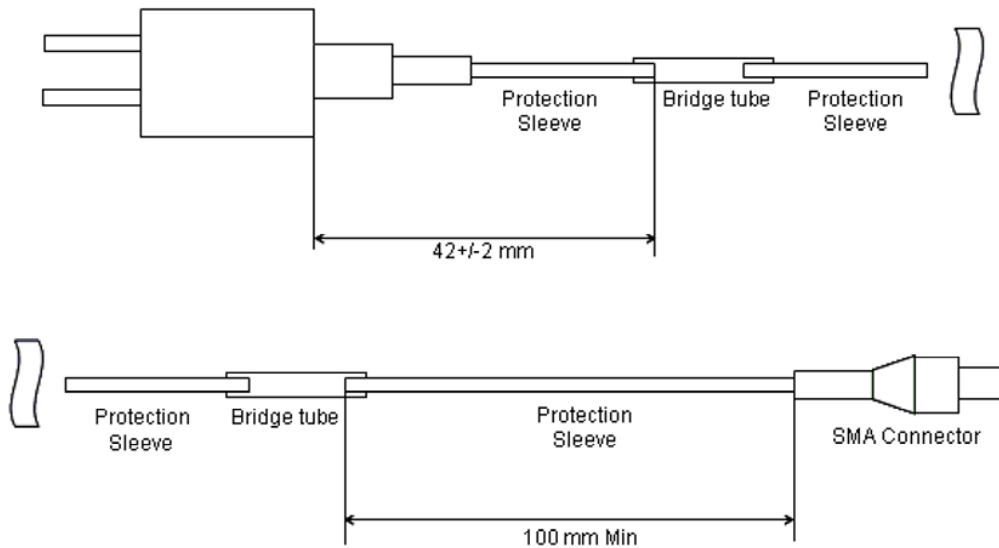


Figure 2 Schematic drawing of protection sleeve, bridge tubes and SMA-connector.

Remarks: Bridges tubes are not glued but moderately fixed by crimping