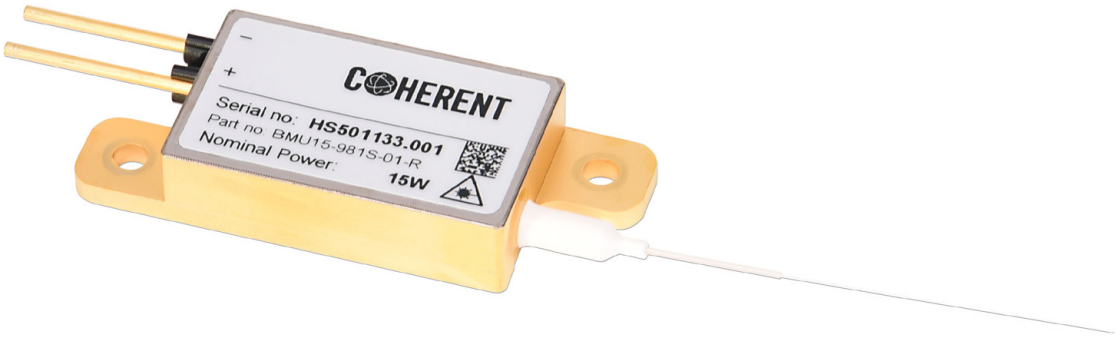
Diode Laser Components

FACTOR SERIES
FIBER-COUPLED DIODE LASER MODULE

976 nm, ≥28 W, 106.5 µm, VBG, 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 Nd^{3+}, Tm^{3+} and Yb^{3+} 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
- Feedback protection at 1030-1200 nm
- VBG for wavelength stabilization

APPLICATIONS

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

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Device Specification

Optical Paramenter[1]	BMU4E
Center Wavelength Range[3] (nm)	976
Center Wavelength Tolerance[3] (nm)	±0.5
Output Power[2] (W)	≥28, typ. 30
Operating Condition	CW
Spectral Width (FWHM) (nm)	≤0.4
Wavelength Locked Output Power Range	7 - 10A
Slope Efficiency (W/A)	typ. 3.3
Wavelength Temp. Coefficient (nm/°C)	≤0.02
Numerical Aperture (NA)	>90% in 0.15
Fiber Parameters[5]	
Fiber Core Diameter (µm)	106.5 ±1.5
Fiber Cladding Diameter (µm)	125 ±1
Fiber Coating Diameter (µm)	245 ±15
Fiber Loose Tubing Diameter (mm)	-
Numerical Aperture (NA)	0.22 ±0.02
Fiber Length (m)	≥1.5
Fiber Termination	Pigtail
Electrical Parameters[1]	
Power Conversion Efficiency (%)	typ. 45
Threshold Current (I_{TH}) (A)	typ. 0.7
Operating Current (I_{OP}) (A)	≤10
Operating Voltage (V_{OP}) (V)	≤7.2
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)	80
Maximum Soldering Temperature for Electrical Leads (°C)	320
Maximum Soldering Time per Lead (s)	10
Mechanical Parameters	
Size (mm^3) [W x D x H]	21.5 x 55 x 9.1
Weight (g)	41.5

Part Number(s)	
BMU4E	BMU30-976S-01-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 cm^2 K/W (0.155 in^2 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.

Package Dimension

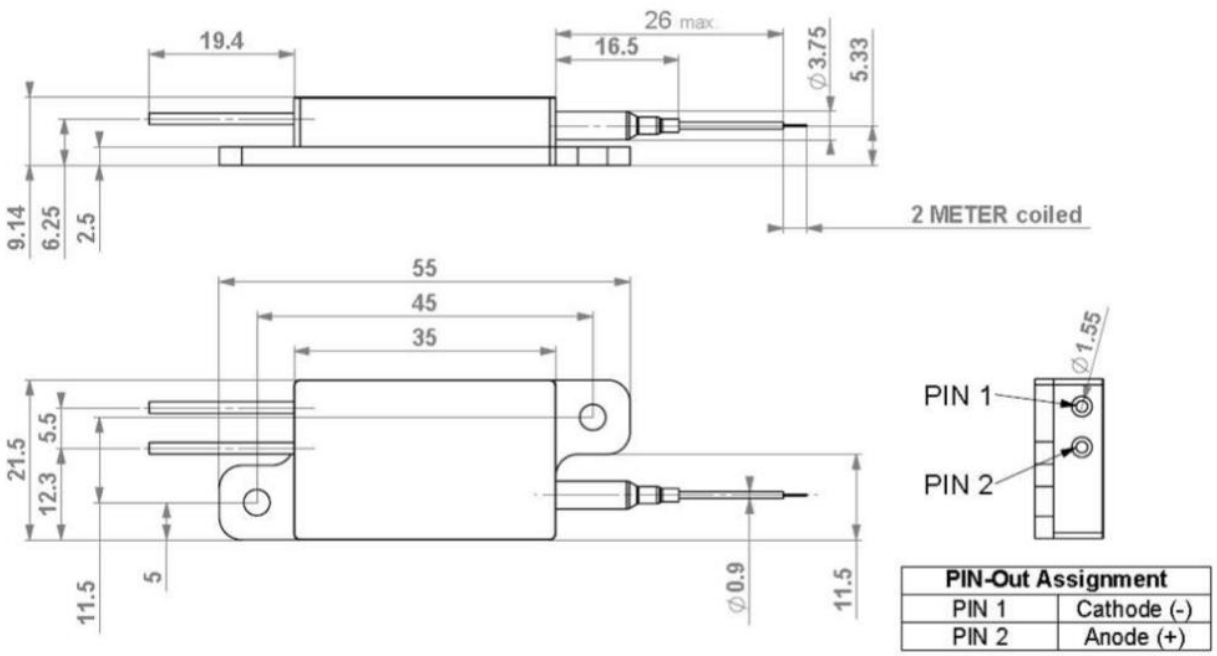

Figure 1 *Housing bottom plate material: Cu*

All dimensions are given in mm (Tolerances: +/- 0.15)

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