JENOPTIK
GERMANY

High Brightness Diode Laser Modules
■ NEW: 100 µm Fiber-Coupled Series

JUM20k/100/20_976

Part No. VDM00500

Features:

- High coupling efficiency
- Based on a new chip design
- Extremely high brightness
- Direct modulation up to 500 kHz
- Compact, hermetically sealed package

Applications:

- Pumping of Er^+ and Nd^+ doped fiber lasers and solid-state lasers

The unique brightness is achieved by transforming the asymmetric radiation from the laser diode chip into a symmetrical beam, using a patented micro optics. This beam can be coupled into a 100 µm fiber (under NA 0.20) with a high efficiency.

Diode Laser Group

High Power Diode Laser Modules

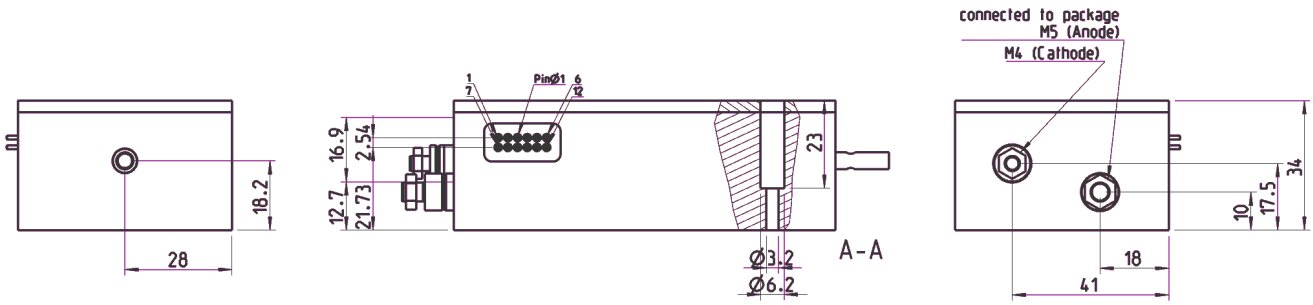
■ NEW: 100 µm Fiber-Coupled Series

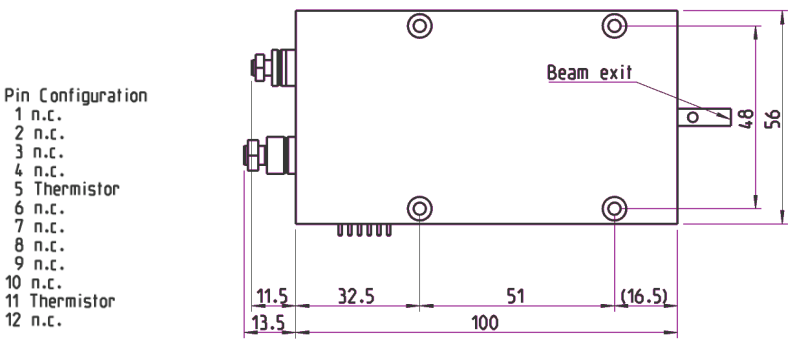
Specifications (Start of Life)

Product, Order No.	JUM20k/100/20_976, VDM00500	
Operation Mode	cw, power modulation only between threshold and maximum current	
Maximum Optical Output Power	20	W
Center Wavelength at 25 °C	976	m
Center Wavelength Variation at 25°C	3	nm
Typical Spectral Bandwidth (FWHM)	6	m
Maximum Spectral Bandwidth (FWHM)	7	nm
Typical Operation Current	38	\
Maximum Operation Current	40	A
Typical Threshold Current	3	\
Maximum Threshold Current	4	A
Typical Slope	0.6	V/A
Minimum Slope	0.5	W/A
Maximum Operating Voltage	2.5	'
Fiber Core Diameter, Numerical Aperture	100 µm, NA 0.22	
Fiber Cladding Diameter, Fiber Type	125 µm, all silica; 2.5 mm simplex tubing	
Min. Fiber Bending Radius	60	mm
Fiber Length	2 m, non removable	
Fiber Termination Far End	F-SMA 905	
Temperature Sensor, Energy Constant	NTC 10k, 3988 K	
Anode, Cathode Connectors	M5, M4	
Operation Conditions	Non-condensing atmosphere	
Mounting	Via thermally conductive foil (thickness 25...100 µm) on cooled surface (water cooled plate or TEC)	
Note	**Do not mount via any paste-like media!**	
Operation Temperature	15...30°C measured with integrated temperature sensor	
Storage Temperature	-20 ... +70°C	
Expected Lifetime	> 10,000 h (constant current)	

Options on request: Monitor photodiode; 15 W @ 808 nm; filter against back reflection (1030…1100nm), cleaved fiber end and hytrel tubing (VDM00503)

Accessories: Suited bench top LD / TEC driver (VAS00300), suited OEM LD / TEC driver (VAS00400), suited air cooler (VZB00060), PCB board (VZB00160, attached to the LD in the standard version; if not wanted, customer needs to solder directly to the pins, see the manual)





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