20W 9xxnm Uncooled Multimode Laser Diode Module

MU20-9xx-01/02

Bookham's new multimode single emitter based laser diode module MU20-9xx-01/02 has been designed to provide an increased power output enabling fiber laser and direct system manufacturers to generate higher powers with fewer modules, allowing for more compact pump configurations, greater pump block efficiency and simplification of packaging.

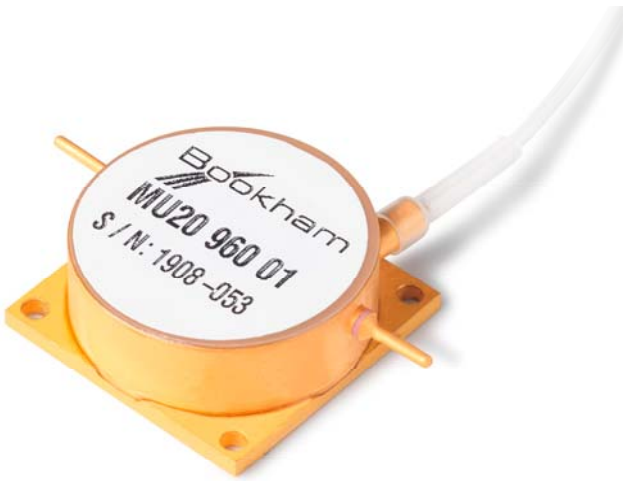
The module includes multimode laser diodes with E2 front mirror passivation that prevents Catastrophic Optical Damage (COD) to the laser diode facet even at very high power levels. The laser diodes are connected in series to allow for fast current switching. The module includes a feedback protection filter that protects the laser diodes from harmful fiber laser wavelength feedback light.

Features:

- Single emitter based laser diode module
- High output power of 20W
- 0.15NA or 0.22NA 105µm core multimode fiber pigtail
- Floating anode/cathode
- Fiber laser feedback protection
- Standard wavelengths at 915, 940, 960, 975nm
- RoHS compliant

Applications:

- Fiber laser pumping
- Direct applications
- Material processing
- Medical



Characteristics

Conditions unless otherwise stated:
Parameters at 25°C heat sink temperature and use of a thermal interface material rated for a thermal contact resistance of less than 1.0cm^2 K/W (0.155in^2 K/W). Pigtail fiber with 105µm core diameter and 0.15NA or 0.22NA.

Parameter	Symbol	Typical	Unit
CW Output Power	P_{op}	20	W
Central Wavelength [1] MU20-915-01/02 MU20-940-01/02 MU20-960-01/02 MU20-975-01/02	 λ_{c915} λ_{c940} λ_{c960} λ_{c975}	 915 ± 10 940 ± 10 960 ± 10 975 ± 10	nm
Spectral Width (90% of Power)	$\Delta\lambda$	6	nm
Threshold Current	I_{th}	500	mA
Operating Current	I_{op}	8.5	A
Operating Voltage	V_{op}	5.5	V
Operating Temperature	T_{op}	25 ± 5	°C

[1] Reduced wavelength window/extended range available on request (900-1070nm).

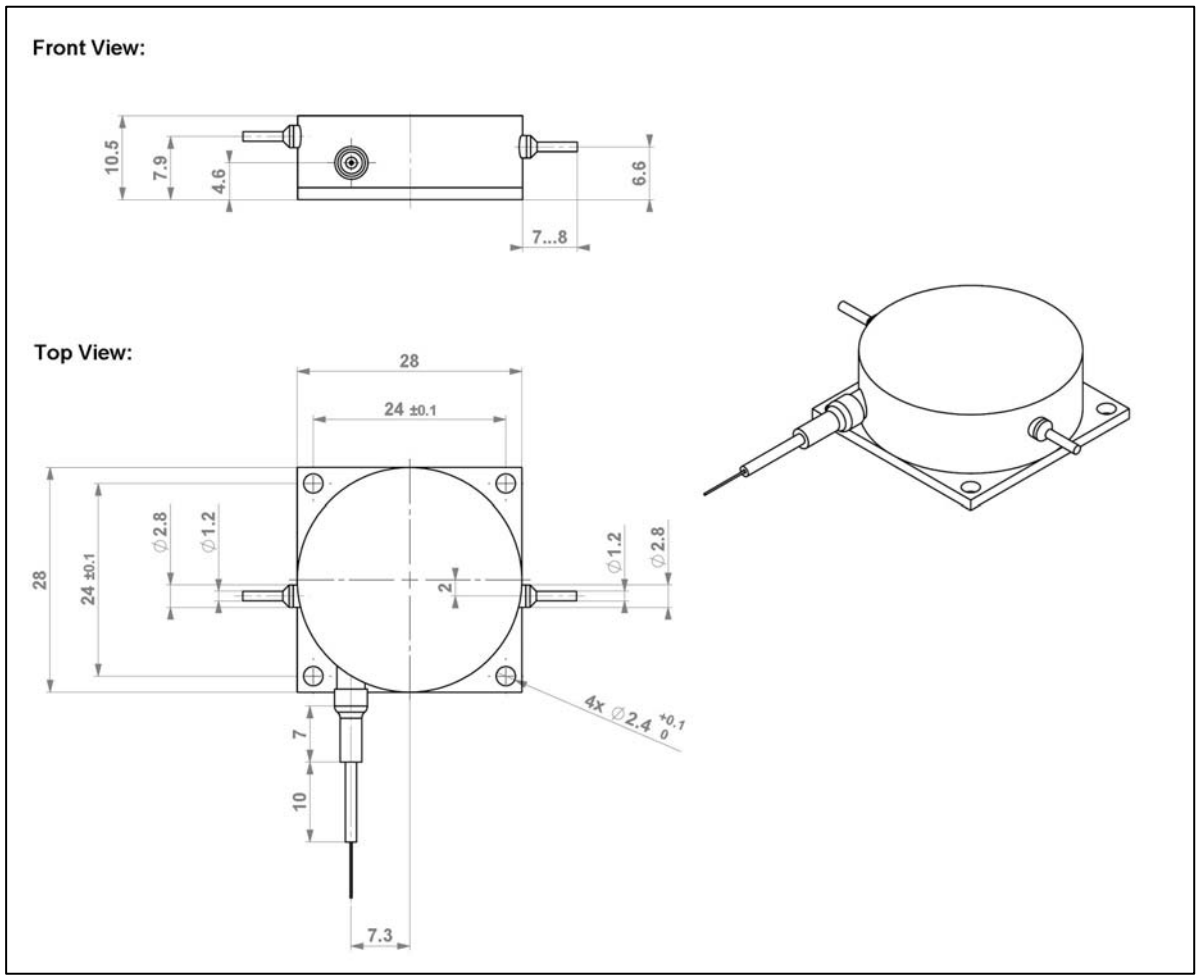
Absolute Ratings

Parameter	Min	Max	Unit
ESD	–	500	V
Storage Temperature	0	75	°C
Lead Soldering Temperature	–	250	°C
Lead Soldering Time	–	10	Sec
Operating Case Temperature	15	45	°C
Relative Humidity	5	75	%

Fiber Specification

Parameter	Min	Typ	Max	Unit
Buffer Diameter	230	250	270	µm
Cladding Diameter	123	125	128	µm
Core Diameter	102	104	106	µm
Numeric Aperture	–	0.15 0.22	–	–
Fiber Length	–	1.5	–	m

Package Dimensions (mm)



RoHS Compliance

Bookham is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

Ordering Information:

MU20-915-01	20W 915nm Multimode Laser Diode Module with 0.15NA fiber
MU20-940-01	20W 940nm Multimode Laser Diode Module with 0.15NA fiber
MU20-960-01	20W 960nm Multimode Laser Diode Module with 0.15NA fiber
MU20-975-01	20W 975nm Multimode Laser Diode Module with 0.15NA fiber
MU20-915-02	20W 915nm Multimode Laser Diode Module with 0.22NA fiber
MU20-940-02	20W 940nm Multimode Laser Diode Module with 0.22NA fiber
MU20-960-02	20W 960nm Multimode Laser Diode Module with 0.22NA fiber
MU20-975-02	20W 975nm Multimode Laser Diode Module with 0.22NA fiber

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Important Notice
Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Bookham before they become applicable to any particular order or contract. In accordance with the Bookham policy of continuous improvement specifications may change without notice. The publication of information in this data sheet does not imply freedom from patent or other protective rights of Bookham or others. Further details are available from any Bookham sales representative.

DANGER
INVISIBLE LASER RADIATION – AVOID DIRECT EXPOSURE TO BEAM
MAX POWER 20W
WAVELENGTH 900 - 1070nm
CLASS IV LASER PRODUCT
THIS PRODUCT COMPLIES WITH 21CFR 1040.10

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT
Maximum Power 20W
Wavelength 900 – 1070nm
REFERENCE IEC 60825-Edition 1.2

ISO9001:2000 Certified
FM 15040

ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

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