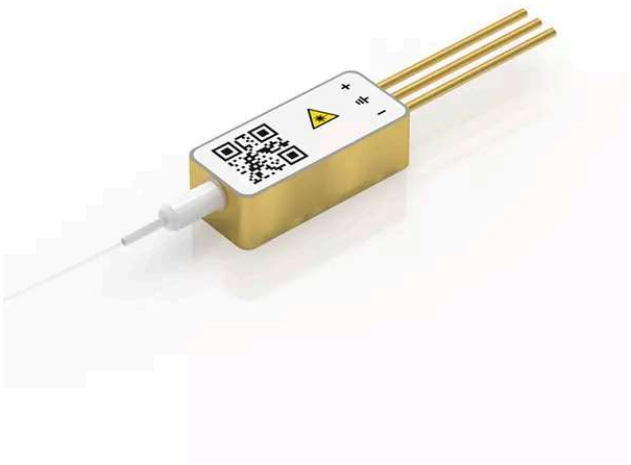
COHERENT

DATASHEET

Diode Lasers

PULSED 1060 nm SLD TYPE HIGH POWER UNCOOLED 3-PIN MICRO-FORMAT LASER DIODE MODULE



The new Coherent MLU96A1060CWG high power single mode laser module has been designed as a broadband compact light source for pulsed fiber lasers. It features a compact 3-pin miniature package. The device achieves high kink free output powers of 1 W pulse peak emitting a SLD type spectrum of larger 10 nm that helps to suppress SBS generation in pulsed fiber lasers.

FEATURES AND BENEFITS

- High kink-free pulse output power, up to 1 W peak
- Wavelength of 1060 nm
- SLD type spectrum of >10 nm
- Short pulse operation: 5 ns–500 ns
- Hermetically sealed uncooled 3-pin micro-format package

APPLICATIONS

- Fiber lasers
- Sensing

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Coherent, Inc.
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p. (800) 527-3786 | (408) 764-4983
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Parameter	MLU96A1060CWG
Package	3-pin
Operating Condition	Pulsed
CW Electrical and Optical Specification[1]	
Threshold Current (mA)	90 (max.)
Operating Forward Current (mA)	750 (max.)
Operating Power (mW)	350 (typ.), 300 (min.)
Operating Forward Voltage (V)	1.5 (typ.), 2.5 (max.)
Wavelength (centroid)[4] (nm)	1060
Wavelength at chip bar test level (250mW) (nm)	1050 - 1060
Spectral Width (200 mW) (nm)	10 (min.)
Polarization Extinction Ratio (dB)	13 (typ.), 10 (min.)
PULSED SPECIFICATIONS[2]	
Output Power (W)	1.0 (typ.), 0.8 (min.), peak power
Operating Peak Current (A)	2 (max.)
Center Wavelength (Centroid) (nm)	1060 (typ.)
Center Wavelength Range (nm)	1050 - 1075
Pulse Width (ns)	5 (min.), 500 (max.)
Duty Cycle (%)	2
ABSOLUTE MAXIMUM RATINGS[3]	
Package	
Operating Temperature (°C)	0 - 75
Storage Temperature (°C)	-40 - 85
Lead Soldering Temperature (10 s max) (°C)	350 (max.)
Laser	
Laser Forward Current (for max. 10 sec) (mA)	1000 (max.)
Laser Reverse Current (µA)	10 (max.)
Laser Reverse Voltage (V)	2 (max.)
ESD Damage (HBM, C=100 pF, R=1.5 kW) (V)	500 (max.)
Fiber Pigtail	
Fiber Bend Radius (mm)	7 (min.)
Fiber Pull Force (N)	5 (max.)
Fiber Type	Corning HI1060 or equivalent
Fiber Core Diameter (µm)	5.9
Mode Field Diameter (µm)	5.9 (typ.), 5.6 (min.), 6.2 (max.)
Buffer Diameter (µm)	245 (typ.), 235 (min.), 255 (max.)
Fiber Length (from case to fiber end) (m)	1 (min.)
Recoating Diameter (µm)	320 (max.)
Proof Test Level (kpsi)	200 (min.)
Miscellaneous	
RoHS Compliance	compliant (China RoHS 50)
Laser Safety	Class 4 Laser Product

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Parameter	MLU96A1060CWG

Notes:
1. Operating characteristics (BOL)
Conditions unless otherwise stated:
Case temperature: -20 to +75 °C, Submount temperature: 25 °C, Operating current 750 mA, CW operation
2. Target Operating characteristics (BOL)
Conditions unless otherwise stated:
Ambient temperature 25 °C, 10 ns pulse width, 100 kHz repetition rate
3. The absolute maximum ratings are conditions for which the device is expected to recover fully the specified performance. Exceeding these limits may impair the device reliability. The ratings apply to each parameter in isolation; that is when all other parameter have values within the relevant characteristics. It cannot be assumed that limiting values of more than one parameter may be applied to a device at the same time.
Absolute maximum ratings for module operation at carrier temperature of 25 ±2 °C, cw operation

4. No screen

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