MAP Tunable DBR Laser
(mTLG-A1)

Key Features

- Single, Dual, or Quad channel configurations available
- C- or L-Band tunability
- Wavelength tuning range of 38 nm
- 25 GHz channel spacing
- Narrow linewidth <5 MHz
- C-band features:
  - Output power >12 dBm
  - SMSR 40 dB min

Applications

- Optical amplifier testing
- Tunable laser grids
- DWDM transmission testing
- Fiber characterization
- Transmitter and receiver testing

Compliance

- The MAP Tunable DBR Laser, when installed in a MAP chassis, complies with CE, CSA/UL/IEC61010-1, plus LXI Class C requirements and meets the requirements of Class 1M in standard IEC 60825-1 (A2:2001)

INVISIBLE LASER RADIATION
DO NOT VIEW DIRECTLY WITH
OPTICAL INSTRUMENTS
CLASS 1M PRODUCT
(IEC/EN 60825-1 / A2:2001)
40mW at 1550nm

The Multiple Application Platform (MAP-200) Tunable Distributed Bragg Reflector (DBR) laser (mTLG-A1) is a new-generation tunable laser that is ideal for DWDM testing where the capability to change wavelength on demand over the C- and L-bands with 25 GHz spacing is essential.

The MAP-200 is the first photonic layer lab and manufacturing platform to be LAN Extensions for Instrumentation (LXI)-compliant, bringing the full power of Ethernet connectivity and ease of use of interchangeable virtual instrument (IVI) drivers to the optical test environment. The MAP-200 platform's industry-leading density and configurability enables test engineers to meet specific application requirements in the smallest possible footprint.

The new mTLG-A1 is based on a Sampled Grating Distributed Bragg Reflector (SG-DBR) laser with an integral wavelength locker. Wavelength and output power settings are controlled using the MAP-200 local interface or automation interfaces. The integrated wavelocker and automatic power control loop enable very stable operation.

Specifications

Parameter	C-Band	L-Band
Wavelength		
Tuning range	191.30 to 196.10 THz, 1528.77 to 1567.13 nm	186.35 to 190.95 THz,1570.01 to 1608.76 nm
Accuracy[1,2,3]	±2 GHz (± 0.016 nm)	
Stability 15 minutes [1,2,3]	±0.005 nm Typ	
Stability 24 hours[1,2,3]	±0.01nm Typ	
Channel spacing	25 GHz	
Power		
Setting range[4]	7 to 13 dBm	7 to 11 dBm
Stability 15 minutes[1,2,3]	±0.005 dB Typ	
Stability 24 hours[1,2,3]	±0.03dB Typ	
Resolution	<0.1 dB Typ	
Spectral properties		
Linewidth[5]	≤5 MHz	
SMSR	40dB min, 45 dB Typ	38 dB min, 45 dB Typ
RIN	–140 dB/Hz Typ;–135 dB/Hz Max	–138.5 dB/Hz Typ; –133.5dB/Hz Max
Other		
Fiber type	Polarization maintaining fiber; Polarization aligned to slow axis and connector	
Supported connectors	FC/APC	
Warm-up time	1 hour	
Operating temperature	10 to 40°C	
Humidity	<80% RH, 10 to 40°C non-condensing	
Dimension	4.06 x 13.26 x 37.03 cm (1.6 x 5.22 x 14.58 in)	
Weight	1.3 kg (2.95 lbs) maximum (varies with configuration)	

1. At full power.
2. After 1-hour warm up.
3. Constant temperature within 25 ±3°C.
4. Power at max setting: >12 dBm for C-band and >10 dBm for L-band.
5. Natural (instantaneous) linewidth of the laser; with self-homodyne measurements indicated linewidth is typically 50-100 MHz.

Ordering Information

Product Code	Description
MTLG-A1C10	C-band single laser
MTLG-A1C20	C-band dual density per module
MTLG-A1C40	C-band quad density per module
MTLG-A1L10	L-band single laser
MTLG-A1L20	L-band dual density per module
MTLG-A1L40	L-band quad density per module
MTLG-A1C1L1	C- and L-band dual density per module

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