

MAP DFB Laser

(mDFB-A1)

The Multiple Application (MAP) Distributed Feedback Source (mDFB-A1) is optimized for the industry-leading Viavi Solutions™ MAP-200 platform. Based on the previous-generation Multiple Application Platform (MAP), the MAP-200 is the first photonic layer lab and manufacturing platform that is LAN Extensions for Instrumentation (LXI)-compliant by conforming to the required physical attributes, Ethernet connectivity, and interchangeable virtual instrument (IVI) drivers. The MAP-200 platform is optimized for density and maximum configurability to meet specific application requirements in the smallest possible foot print.

The mDFB-A1 is an excellent source for dense wavelength division multiplexing (DWDM) system testing. A combination of DFB lasers may be used to create an ITU grid in which optical frequency represented by a DFB laser corresponds to the transmitter in the optical network. The mDFB-A1 can be selected to comply with the 100 GHz ITU grid in the C- and L-band (1529 to 1610 nm). The lasers typically show a side-mode suppression ratio of 40 dB and can be modulated internally from 0.2 to 400 kHz in square, sinusoidal and triangular waves.

Key Features

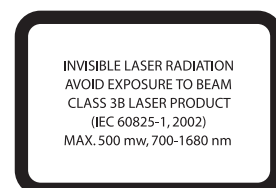
- One or two DFB laser(s) per cassette
- 1.5 nm wavelength tuning range
- 10 or 20 mW output power
- 200 Hz to 400 kHz modulation
- 100 GHz wavelength spacing
- Single-mode fiber (SMF) and polarization maintaining fiber (PMF) output available
- Can be automated when used with MAP-200 LXI-compliant interfaces and IVI drivers

Applications

- DWDM transmission testing
- Optical amplifier testing
- Fiber characterization

Safety Information

- The MAP DFB, when installed in a MAP chassis, complies with CE, CSA/UL/IEC61010-1, LXI Class C requirements, meets the Class 3B requirements in standard IEC 60825-1(2002), and complies with 21 CFR 1040.1, except the deviations per Laser Notice No. 50, July 2001.



Specifications

Parameters	Performance
Wavelength	
Range	ITU grid C+L-band (see Channel Code Grid) ±0.03 nm
Accuracy	±0.03 nm
Stability 15 minutes ^{1, 2, 3}	±0.005 nm
Stability 24 hours ^{1, 2, 3}	±0.01 nm
Tuning range	≥1.5 nm
Resolution	0.01 nm
Power	
Laser output ⁴	10 or 20 mW
Laser power uncertainty ³	±5%
Stability 15 minutes ^{1, 2, 3}	±0.005 dB
Stability 24 hours ^{1, 2, 3}	±0.03 dB
Resolution ⁵	0.01 dB
Attenuation range	10 dB
Internal modulation¹	
Range ⁶	0.2 to 400 kHz
Depth	0 to 100%
Duty cycle	15 to 85%
Function	Square, Sinusoidal, and Triangular

Parameters	Performance
Spectral properties	
Width coherence control off	<30 MHz
Width coherence control on	≥500 MHz
Side mode suppression ratio (SMSR)	>40 dB
Optical signal to noise ratio (OSNR) (peak to maximum background)	30 dB
Optical isolation	30 dB
Relative intensity noise (RIN)	-140 dB/Hz
Recommended calibration period	1 year
Operating temperature	10 to 40°C
Storage temperature	-30 to 60°C
Dimensions (W x H x D)	4.06 x 13.26 x 37.03 cm (1.6 x 5.22 x 14.58 in)
Weight	0.5 kg (1.1 lb)

1. At full power
2. After 1 hour warm-up
3. Constant temperature within 25±3°C
4. Not including options
5. For maximum power to (maximum power-8 dB)
6. Nominal duty cycle is accurate from 0.2 to 100 kHz. Analog modulation bandwidth is 400 kHz

Ordering Information

Product Code	Description
Base Options (Required, select one)	
MDFB-A1110	DFB single channel laser source, 10 mW
MDFB-A1210	DFB dual channel laser source, 10 mW
MDFB-A1120	DFB single channel laser source, 20 mW
MDFB-A1220	DFB dual channel laser source, 20 mW
Laser Wavelength Options (Required, select one or two)	
MITUL62	186.2 THz, 1610.06 nm wavelength
MITUL63	186.3 THz, 1609.19 nm wavelength
MITUL64	186.4 THz, 1608.33 nm wavelength
MITUL66	186.6 THz, 1606.60 nm wavelength
MITUL67	186.7 THz, 1605.74 nm wavelength
MITUL68	186.8 THz, 1604.88 nm wavelength
MITUL69	186.9 THz, 1604.03 nm wavelength
MITUL70	187 THz, 1603.17 nm wavelength
MITUL71	187.1 THz, 1602.31 nm wavelength
MITUL72	187.2 THz, 1601.46 nm wavelength
MITUL73	187.3 THz, 1600.60 nm wavelength
MITUL74	187.4 THz, 1599.75 nm wavelength
MITUL75	187.5 THz, 1598.89 nm wavelength
MITUL76	187.6 THz, 1598.04 nm wavelength
MITUL77	187.7 THz, 1597.19 nm wavelength
MITUL78	187.8 THz, 1596.34 nm wavelength
MITUL79	187.9 THz, 1595.49 nm wavelength
MITUL80	188 THz, 1594.64 nm wavelength
MITUL81	188.1 THz, 1593.79 nm wavelength
MITUL82	188.2 THz, 1592.95 nm wavelength
MITUL83	188.3 THz, 1592.10 nm wavelength
MITUL84	188.4 THz, 1591.26 nm wavelength
MITUL85	188.5 THz, 1590.41 nm wavelength
MITUL86	188.6 THz, 1589.57 nm wavelength
MITUL87	188.7 THz, 1588.73 nm wavelength
MITUL88	188.8 THz, 1587.88 nm wavelength
MITUL89	188.9 THz, 1587.04 nm wavelength
MITUL90	189 THz, 1586.20 nm wavelength
MITUL91	189.1 THz, 1585.36 nm wavelength
MITUL92	189.2 THz, 1584.53 nm wavelength
MITUL93	189.3 THz, 1583.69 nm wavelength
MITUL94	189.4 THz, 1582.85 nm wavelength
MITUL95	189.5 THz, 1582.02 nm wavelength
MITUL96	189.6 THz, 1581.18 nm wavelength
MITUL97	189.7 THz, 1580.35 nm wavelength

Product Code	Description
Laser Wavelength Options (Required, select one or two) (Continued)	
MITUL98	189.8 THz, 1579.52 nm wavelength
MITUL99	189.9 THz, 1578.69 nm wavelength
MITUC00	190 THz, 1577.86 nm wavelength
MITUC01	190.1 THz, 1577.03 nm wavelength
MITUC02	190.2 THz, 1576.20 nm wavelength
MITUC03	190.3 THz, 1575.37 nm wavelength
MITUC04	190.4 THz, 1574.54 nm wavelength
MITUC05	190.5 THz, 1573.71 nm wavelength
MITUC06	190.6 THz, 1572.89 nm wavelength
MITUC07	190.7 THz, 1572.06 nm wavelength
MITUC08	190.8 THz, 1571.24 nm wavelength
MITUC09	190.9 THz, 1570.42 nm wavelength
MITUC10	191 THz, 1569.59 nm wavelength
MITUC11	191.1 THz, 1568.77 nm wavelength
MITUC12	191.2 THz, 1567.95 nm wavelength
MITUC13	191.3 THz, 1567.13 nm wavelength
MITUC14	191.4 THz, 1566.31 nm wavelength
MITUC15	191.5 THz, 1565.50 nm wavelength
MITUC16	191.6 THz, 1564.68 nm wavelength
MITUC17	191.7 THz, 1563.86 nm wavelength
MITUC18	191.8 THz, 1563.05 nm wavelength
MITUC19	191.9 THz, 1562.23 nm wavelength
MITUC20	192 THz, 1561.42 nm wavelength
MITUC21	192.1 THz, 1560.61 nm wavelength
MITUC22	192.2 THz, 1559.79 nm wavelength
MITUC23	192.3 THz, 1558.98 nm wavelength
MITUC24	192.4 THz, 1558.17 nm wavelength
MITUC25	192.5 THz, 1557.36 nm wavelength
MITUC26	192.6 THz, 1556.55 nm wavelength
MITUC27	192.7 THz, 1555.75 nm wavelength
MITUC28	192.8 THz, 1554.94 nm wavelength
MITUC29	192.9 THz, 1554.13 nm wavelength
MITUC30	193 THz, 1553.33 nm wavelength
MITUC31	193.1 THz, 1552.52 nm wavelength
MITUC32	193.2 THz, 1551.72 nm wavelength
MITUC33	193.3 THz, 1550.92 nm wavelength
MITUC34	193.4 THz, 1550.12 nm wavelength
MITUC35	193.5 THz, 1549.32 nm wavelength
MITUC36	193.6 THz, 1548.51 nm wavelength
MITUC37	193.7 THz, 1547.72 nm wavelength

Ordering Information (Continued)

Product Code	Description
Laser Wavelength Options (Required, select one or two) (Continued)	
MITUC38	193.8 THz, 1546.92 nm wavelength
MITUC39	193.9 THz, 1546.12 nm wavelength
MITUC40	194 THz, 1545.32 nm wavelength
MITUC41	194.1 THz, 1544.53 nm wavelength
MITUC42	194.2 THz, 1543.73 nm wavelength
MITUC43	194.3 THz, 1542.94 nm wavelength
MITUC44	194.4 THz, 1542.14 nm wavelength
MITUC45	194.5 THz, 1541.35 nm wavelength
MITUC46	194.6 THz, 1540.56 nm wavelength
MITUC47	194.7 THz, 1539.77 nm wavelength
MITUC48	194.8 THz, 1538.98 nm wavelength
MITUC49	194.9 THz, 1538.19 nm wavelength
MITUC50	195 THz, 1537.40 nm wavelength
MITUC51	195.1 THz, 1536.61 nm wavelength
MITUC52	195.2 THz, 1535.82 nm wavelength
MITUC53	195.3 THz, 1535.04 nm wavelength
MITUC54	195.4 THz, 1534.25 nm wavelength
MITUC55	195.5 THz, 1533.47 nm wavelength
MITUC56	195.6 THz, 1532.68 nm wavelength
MITUC57	195.7 THz, 1531.90 nm wavelength
MITUC58	195.8 THz, 1531.12 nm wavelength
MITUC59	195.9 THz, 1530.33 nm wavelength
MITUC60	196 THz, 1529.55 nm wavelength

Product Code	Description
Fiber Type Options (Required, select one)	
M100	9/125 fiber type
M103	PMF fiber type
Connector Options (Required, select one)	
MFP	FC/PC connector type
MFA	FC/APC connector type



If the configurations available to not meet your performance requirements, please contact your global sales and customer service team to discuss the potential for specialized solutions.



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