



MAP DFB Laser – Analog Modulation

(mDFA-A1)

The Multiple Application Platform (MAP) Distributed Feedback Source with Analog Modulation (mDFA-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 mDFA-A1 features 1 GHz of modulation bandwidth and low distortion for accurate CATV receiver testing. The cassette features a built-in laser-bias driver and thermo-electric cooler controller for optimal wavelength and power stability.

The radio frequency (RF) modulation is applied through an SMA connector (50 Ohm impedance) on the front panel of the cassette. The RF path is an unamplified connection directly to the laser through an integrated bias-T.

Key Features

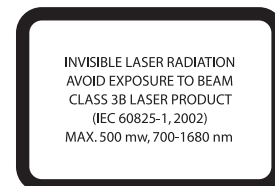
- 10 mW output power
- 1 GHz of modulation bandwidth
- Very low second and third order distortion
- Can be automated when used with MAP-200 LXI-compliant interfaces and IVI drivers

Applications

- CATV reference transmitter
- Multitone receiver test

Safety Information

- The MAP DFB Source with Analog Modulation, 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

Parameter	Performance
Maximum radio frequency (RF) input power	+13 dBm
Wavelength	1550.1 nm
Wavelength accuracy	±0.1 nm
Laser peak output power	10 dBm
Laser power uncertainty ^{1, 2, 3}	±5%
Stability 24 hours ^{1, 2, 3}	±0.1 dB
Side mode suppression ratio (SMSR)	>30 dB
Optical isolation	>30 dB
Optical return loss (RL)	>40 dB
Relative intensity noise (RIN)	< -157 dB/Hz
Recommended calibration period	1 year
Spectral linewidth	<3.0 MHz
Bandwidth	1 GHz
Second order distortion ⁴	< -34 dBc
Third order distortion ⁴	< -44 dBc
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 one hour warm-up

3. Constant temperature within 25 ±3°C

4. $I_F = I_{op}$, 35% OMI, F1=595.25MHz, F2=553.25MHz

Ordering Information

Product Code	Description
Base Options (Required, select one)	
MDFA-A1000	Modulated DFB laser source
Laser Wavelength Options (Required)	
MITUC34	193.4 THz, 1550.12 nm wavelength
Connector Options (Required, select one)	
MFP	FC/PC connector type
MFA	FC/APC connector type

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



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