

# MAP-Series Selection Guide



The MAP series is the first photonic layer lab and manufacturing platform that complies with LAN Extensions for Instrumentation (LXI) by conforming to the required physical attributes, Ethernet connectivity, and interchangeable virtual instrument (IVI) drivers, which are intuitive and optimized for ease of use with popular Application Development Environments such as LabVIEW, Visual C++, Visual Basic, and LabWindows™.

The LightDirect™ family offers a wide range of foundational optical test modules that are used in simple bench test applications, or combined in larger, multi-modules user driven automated test systems. These modules are characterized by their simple control interface and single function nature. Individually or together, they form the foundation of most optical test applications. VIAVI offers many modules, such as light sources, polarization scramblers, power meters, attenuators, switches, and spectrum analyzers.

## Optical Sources and Amplifiers



### Tunable Distributed Bragg Reflector Laser Sources

**mTLG-C3** is a next-generation tunable laser that is ideal for DWDM testing where changing the wavelength on demand over the C- and L-band with 50 GHz spacing is required. Available in single, dual or quad configurations. The C-band is available in a high power variant.



### Broad-band laser source

**mBBS-C1** is a broadband source that provides 100mW of amplified spontaneous emission (ASE) output for stable and spectrally flattened C- and L-band sources. The source provides high spectral stability better than 0.02 dB.



### General-Purpose light Source

**mSRC-C2** is a general-purpose light source within key fixed telecom wavelength bands: 850, 1300, 1310, 1490, 1510, 1550, 1610, 1625 and 1653 nm. Available in three different emitter configurations, Fabry Perot (FP lasers), low power LEDs, Super Luminescent Diode (SLED) and Distributed Feedback (DFB) in multimode or single mode applications.

NEW



### Continuously Tunable Laser Source mTLS-C2

is an extended C and L-band continuously tunable high-power laser source for general purpose applications across DWDM, optical amplifier and silicon photonic test applications with a wavelength range from 1480 to 1635 nm.



### Erbium Doped Fiber Amplifier

**mEDFA-C1** is available in six configurations: Extended C-band pre-amplifier, dual pre-amplifier, booster, DWDM booster and maximum power and L-band booster. It features a low-noise figure, high output power and high gain.



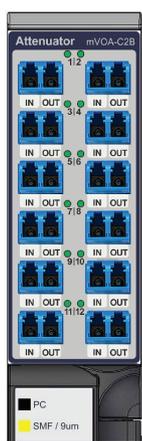
### O-band Optical Fiber Amplifier mOFA-C1

is a revolutionary fiber amplifier designed to work in the O-band based on bismuth doped optical fiber. Ideal for amplification of LAN WDM and CWDM formats with a single amplifier, the mOFA-C1 features a low noise figure and linear performance that make it ideal for 800G/1.6T transmission testing.

## Optical Signal Conditioning



**Variable Optical Attenuator**  
**mVOA-C1** is the industry's most compact modular solution. Available with one, two, or four variable optical attenuators (VOA) per module with or without an internal power meter or with output tap monitor. Enabling single-level control for receiver and amplifier testing.



COMING SOON

**High Density Variable Optical Attenuator**  
**mVOA-C2B** is a compact device designed to enhance optical network performance testing. With low power consumption and fast response times, it's ideal for modern, energy-efficient networks. The mVOA-C2B offers a 45dB attenuation range for precise control and an optional internal power meter for real-time monitoring and optimization. It supports triggering for easy integration into complex setups and is built for durability in demanding conditions, making it a valuable asset for large-scale network deployments.



**Passive Utility Device**  
**mUTL-C1** is a passive utility module includes, couplers, splitters, mux/demux, band-pass filters and even blank modules for customer supplied components.



**Polarization Scrambler Controller**  
**mPCX-C1** is a polarization scrambler that scrambles, controls and provides stabilization for applications such as temporal depolarization and 800G/1.6T+ coherent interface testing. It offers six pre-defined scrambling patterns, random Rayleigh distribution, ring, polar ring pattern, oscillating ring pattern, random ring pattern and one discrete user defined mode. Offered in C+L, O and All-band variants.



**Variable Back Reflector**  
**mVBR-C1** provides precise levels of return loss to transmitters, enabling measurement of system sensitivity and system degradation as a function of back reflection. Offered in SM and MM variants.

NEW



**Multiport Tunable Filter**  
**mTFX-C2 and mTFX-C3** is a C- and L-band multiport tunable filter that simplifies test signal management for next-generation 800G/1.6T+ interface, sub-systems and system test. It combines variable attenuator, switch, power meter, and DWDM multiplexer functions to dramatically simplify photonic testing of coherent interfaces, amplifier, and DWDM systems. mTFX-C3 C-band variant is for extended C-band applications.

## Optical Signal Switching and Routing



### Optical Switch Solutions

**mOSW-C1/mISW-C1** are the industry’s gold standard for loss and repeatability. With over 80 variations available, there is a configuration ideally suited to all applications. Switches range from 1x2 to 1x176 with options for internal power monitoring, direction monitoring, and power trim. Available in modular plug-in or 19-inch tray.



### Polatis Switch

The Polatis range of optical matrix switches are high-performance, fully non-blocking all-optical matrix switches, available with port counts from 4x4 up to 192x192. They are designed to meet the highest performance, security and reliability needs of mission-critical applications with low optical loss, compact size, low power requirements and fast switching speeds.



### Cross Connect Optical Switch

**mOSX-C1** is a cross connect optical switch that provides high performance and reliability. Available as 16, 32 and 48 port common connection (CC) cassette, the mOSX supports any-to-any port combinations up to the total number of ports on the cassette. It also supports MxN combinations.

## Optical Power and Spectral Measurements

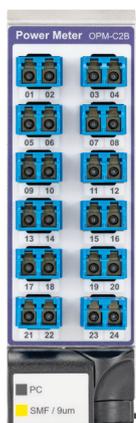


NEW

### Optical Power Meter

**mOPM-C1** is a flexible optical power meter supporting 1, 2, or 4 detectors per cassette in either cassette-mounted or remote configurations. It offers four detector types, including 2 mm and 3 mm InGaAs options with power ranges from -110 to +27 dBm and wavelengths from 750 to 1700 nm, plus a silicon detector optimized for 800-1000 nm. Additional features include integrated remote heads with +33 dBm input power and 80 dB dynamic range, making the mOPM-C1 ideal for high-accuracy, wide-range optical power measurements.

NEW



**High Density Optical Power Meter mOPM-C2B** is a compact module with up to 24 power-sensor channels, boosting efficiency in multi-device testing. It offers precise measurements across a broad wavelength and dynamic range, ideal for data centers and telecom hubs. Durable and user-friendly, it's perfect for both production and lab use.

NEW



**Optical Spectrum Analyzer Module mOSA-C1** is a single slot diffraction grating based spectral measurement system. Based on a next generation monochromator design, the OSA is designed to operate over the 1255 to 1655 nm single-mode fiber range. It boasts the smallest footprint of any OSA in its class.



**High-Resolution Optical Spectrum Analyzer mHROSA-A2** is a high-resolution optical spectrum analyzer that combines sub-GHz resolution performance and compact modularity in a single slot cassette.

The LightTest™ family are application specific, integrated test solutions that leverage the power of the MAP Series Super-Application or PC based software. Built with specialized MAP modules or assemblies of LightDirect modules, LightTest solutions are typically used in bench test applications but can also be combined in larger, multi-modules customer driven automated test systems.



### Passive Component Test Solutions

VIavi Solutions passive component/connector test solution (PCT) consists of a powerful family of modules, software, and peripherals for testing IL, RL, physical length, and polarity of optical connectivity products. Leveraging the modularity and connectivity of the VIavi MAP platforms, the PCT can be configured for R&D, production, or qualification test environments and can address all key fiber types from single mode through OM1 and OM4.



### Single Fiber Insertion Loss and Return Loss Test System

The PCTrm is a MAP-220 based Single mode Insertion Loss (IL) and Return Loss (RL) test meter for single fiber connector applications. Part of the MAP-Series PCT solution family, it features fully EF-compliant multimode Insertion Loss test meters with connector adapters that can be configured for all connectivity applications to ensure maximized productivity.



### Swept Wavelength System

mSWS are swept wavelength test solutions for manufacturing and new device development of passive DWDM devices, ROADMs and Circuit Packs. Provides full characterization of wavelength, across polarization states, including PDL measurements.



### Optical Component Environmental Test Systems

At the core of OCETS Plus is a pair of custom-grade programmable switches (1xN configuration). OCETS switches are specified to higher levels of IL repeatability and background RL than analogue-grade switches. Therefore, the implementation of an OCETS Plus system represents an improvement over the capability of any in-house system that utilizes analogue-grade switches.

## Benchtop Inspection and Cleaning

The family of advanced benchtop microscopes include a range of models designed to support a variety of devices, from patch-cords to transceivers. Each model features unique capabilities, such as automated focus, multifiber support, dual objective optical magnification, digital zoom, and adjustable oblique lighting. Additionally, the CleanBlastPRO fiber end-face cleaning system ensures thorough, precise contamination removal using an air, solvent and vacuum sequence for clean fiber connectors across production facilities.



### FV Benchtop Microscopes

FV microscopes help optical connectivity manufacturers ensure clean fiber connectors throughout their manufacturing process by providing end-face visibility with dual magnification, automated analysis, and auto-focus capabilities.

There are two variants of FV microscopes, 30x (2030) and 400x (2400). All microscopes provide dual magnification, automated analysis, and options for auto-focus. The 2030 microscope is ideal for confirming connector cleanliness throughout manufacturing process while the 2400 microscope is targeted for high resolution applications including confirming polish quality and certifying connector quality.



**FVAM-1000 Benchtop Microscope** is a completely automated inspection solution for multifiber connectors such as MPO. This all-in-one system automatically inspects and analyzes every fiber of an MPO or other multifiber connector with reliability and speed. With FVAm series benchtop microscopes, manufacturing facilities can ensure optimized quality and performance of MPO trunk cables and assemblies at every stage of production.

## Benchtop Inspection and Cleaning continued

NEW



**FVAM-2000 Advanced Benchtop Microscope** is a high-performance inspection solution for dual MPO like OSFP and QSFP and next-gen VSFF connectors, supporting 800G/1.6T formats. It offers a quick-change interface for bulkhead devices and provides a full edge-to-edge fiber endface view with high magnification and resolution, enabling detailed multi-fiber connector inspection in under 8 seconds. Powered by the FiberChekULTRA PC app, it simplifies data entry, enhances productivity, and supports IEC-compliant or custom pass/fail analysis. Its open REST API enables seamless integration into high-volume manufacturing workflows.

NEW



The **mFVU-3000 FlexLight Dual-Objective Connector Microscope** offers advanced lighting flexibility and fully automated dual-objective performance for precise and efficient optical interface inspection. Designed for lab, manufacturing, and field use, it addresses contamination issues that affect network performance and product yield. The system supports fiber and full ferrule imaging with dual objectives for high and low magnification, featuring 10x objective lighting with Köhler co-axial and 2x objective lighting with Köhler axial, angle tunability, and oblique illumination.



### CleanBlastPRO™

CleanBlastPRO™ is a fiber optic end-face cleaning system that component and connectivity manufacturers and integrators can easily deploy throughout their production facilities to ensure clean fiber connectors.

Providing automated connector cleaning at the push of a button, CleanBlastPRO™ streamlines cleaning workflows with intuitive operation, fast throughput, and high-yield performance.

## Accessories

Accessories (Optional)	Product and description	
<i>Fiber Inspection Tools</i>	FiberChek probe microscope	One-button FiberChek Probe delivers a reliable, fully autonomous, handheld inspection solution for every fiber technician.
	P5000i fiber microscope	Automated Fiber Inspection & Analysis Probe provides PASS/FAIL capability to PC, laptops, mobile devices and VIAVI test solutions. The PCT application offers an inspection pass/fail.
<i>Replacement Parts</i>	Mating sleeves	AC500;FC/PC-FC/PC Universal Connector Adapter
		AC501;FC/PC-SC/PC Universal Connector Adapter
		AC502;FC/APC-FC/APC Universal Connector Adapter
		AC503;FC/APC-SC/APC Universal Connector Adapter
<i>Detector Adaptors</i>	A complete range of single ferrule, duplex, and bare fiber power meter adaptor are available at VIAVI including MPO, FC, LC and Integrating spheres. Refer to the AC adaptor selection guide for more information.	

A wider range of inspection tools are available at VIAVI. More information about the products and accessories can be accessed through our website at [www.viavisolutions.com](http://www.viavisolutions.com). For further assistance please contact your local VIAVI account manager or VIAVI directly at 1-844-GO-VIAVI (1-844-468-4284) or to reach the VIAVI office nearest you, visit [viavisolutions.com/contacts](http://viavisolutions.com/contacts).



Power meter adaptors

## MAP-300 Calibration

VIAVI Provides three complementary calibration paths for the MAP-300



1675.900.1123



Contact Us: +1 844 GO VIAVI | (+1 844 468 4284). To reach the VIAVI office nearest you, visit [viavisolutions.com/contact](http://viavisolutions.com/contact)