VIAVI Solutions

Brochure

VIAVI
SmartClass Fiber MPOLx

MPO Optical Loss Test Sets

Dedicated Tier 1 (Basic)
MPO Certification Solution

The VIAVI SmartClass™ Fiber MPOLx is the industry's first dedicated optical loss test set that can perform all the test requirements for Tier 1 (Basic) certification using MPO fiber connectivity in accordance to IEC 61280-4-5 and TIA-526-28. The MPOLx provides a source and power meter that integrate essential MPO test capabilities together to ensure a fast and reliable workflow when testing and certifying network links with native MPO connectivity.

With the MPOLx, field technicians can perform all the necessary test requirements for Tier 1 (Basic) certification in a single solution:

- Measure MPO length
- Measure optical loss
- Check polarity
- Inspect fiber end faces
- Generate certification reports

Drive best test practices by integrating essential functions together with the MPOLx and help technicians finish jobs faster by optimizing their workflow.

Benefits

- Quickly and correctly perform true Tier 1 certification of MPO links and channels without the need for break-out cables
- Simplify the job setup with a variety of time-saving test process automation tools
- Test ALL required wavelengths with a single test
- Store more than a day's worth of results without needing to clean out memory
- Keep test cords safe, and ensure they are pristine, with optional on-board microscope
- Comprehensive test result management with J-Reporter companion application

Key Features

- Perform Tier 1 certification (loss, length, polarity) with pass/fail analysis on 12 fibers at 2 wavelengths in with the press of a single button
- Li-Ion battery for all day testing
- Visibility and control at the source as well as the power meter
- Delivers test results for all 12 MPO fibers in <10 seconds
- Provides native MPO end-face test and inspection in accordance to IEC 61280–4–5 and TIA-526–28
- Dual wavelength optical light sources

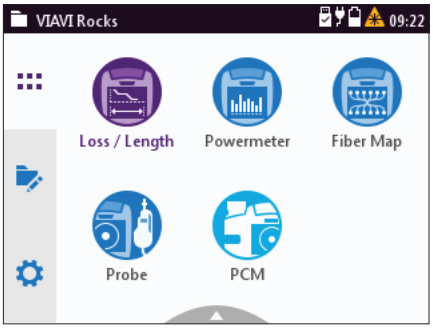
Full Control and Visibility for Technicians

The MPOLx gives technicians the ability to achieve a completely new level of productivity for MPO testing and certification by delivering visibility and control that allows test initiation, viewing, and saving of results at both the Light Source and Power meter. All devices feature a 3.5" color touch screen and optional integrated inspection for both bulkhead and trunk connectors. The MPOLx allows a single technician to inspect MPO end faces and perform tests from either end of the connection, reducing walking back and forth between the two units.

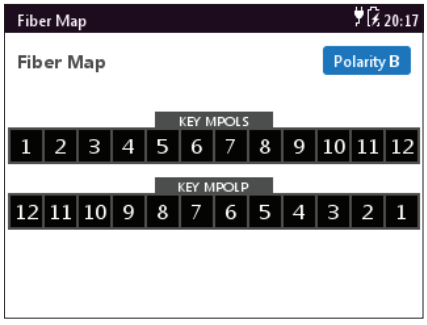
Certification Testing and Troubleshooting All in One

While the MPOLx is primarily an MPO optical loss test set, it provides many additional functions to help troubleshoot and certify MPO-based infrastructure. These include:

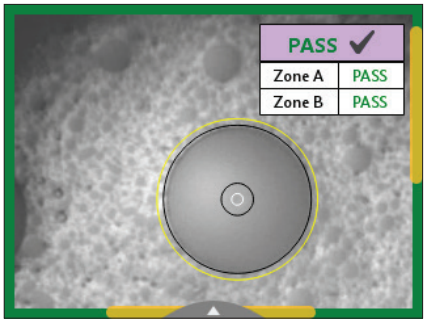
- Fiber Inspection via an attached P5000i probe microscope
- Fiber Inspection via the optional patch cord microscope (also a great way to keep test cords clean)
- Stand alone power meter (MPOLP)
- Stand alone source (MPOLS)
- Fiber Map tool



MPOLP-85P home screen



Fiber Map Application

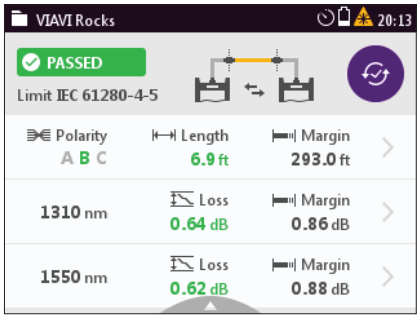


Fiber Inspection Application

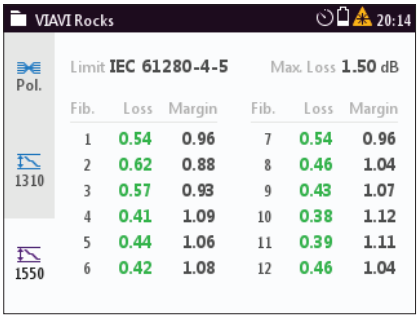
Comprehensive Tier 1 (Loss/Length) Test Results in Under 10 Seconds

The MPOLx delivers all the capabilities a technician needs to provide comprehensive test results in **less than 10 seconds for all 12 fibers** of MPO links and channels.

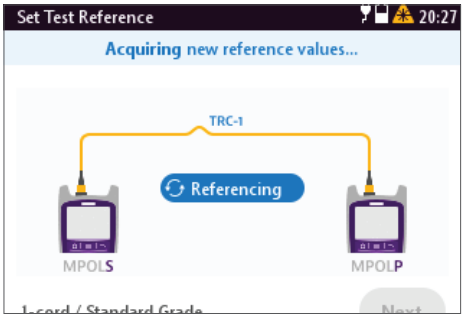
- Color coded pass/fail test results
- Test limit
- Fiber length
- Test wavelengths
- Loss values
- Margins
- Polarity results for each MPO fiber
  – Polarity types (A, B, or C) with visual example
  – Compare actual vs. expected polarity



Test Results Summary



Individual Results: Table View



Step-by-Step Reference Instructions

Comprehensive Test Result Management

Loss/Length test results can be imported and managed using VIAVI J-Reporter. This companion application allows users to manage test results with capabilities such as:

- Editing administrative details such as operator and label
- Sort and filter results
- Export summary or detailed results to .PDF or .CSV
- Provide raw test data to third parties, such as cabling vendors in proprietary format (.PRX)
- Support additional VIAVI test instruments such as Certifier, OLTS-85, and OTDRs

Fiber Certification Report

Cable Label:AB123.U15 to XY789.U12-03 — Pass

Date & Time:	02-12-2022 12:23:34 PM	Site:	Data Center
Limit Type:	IEC 61280-4-5	Building:	
Cable Name:	OS2	Floor:	
Cable Manufacturer:	Generic MPO SMF	Room:	
Connector Name:	MTP/MPO-12	Rack:	
Connector Manufacturer:	NA	Panel:	

Device Name:	MPOLP-85P	Operator Name:	Captain Fiber
MPOLP S/No.:	C-0055	MPOLS S/No.:	C-0054
Local Calibration Date:	09-05-2020	Remote Calibration Date:	08-05-2020
Device Firmware Version:	V02.22.01	Reporting Software Version:	Build_#1546_9.0_2022-03-31_14-41-05

Refractive Index:	1.493	Number of MPO Connections:	0	Measured Polarity:	B	Reference Scheme:	1-cord
Propagation Delay (ns):	1660	Loss per MPO Connection (dB):	0.75	Expected Polarity:	B	Test Cord Connector Grade:	Standard
Length (ft):	6.89	Number of Splices:	0	Referenced Polarity:	B	Set Reference Date:	02-12-2012 12:14:49 AM
Length Limit (ft):	32800.00	Loss per Splice (dB):	0.1	Fiber Polarity:	PASS		
Length Result:	PASS	Fiber Loss 1310nm (dB/km):	0.4				
		Fiber Loss 1550nm (dB/km):	0.3				

Wavelength:1310nm

Local (Rx) Channel	Remote (Tx) Channel	Considered for P/F	Result	Absolute Power (dBm)	Loss (dB)	Limit (dB)	Margin (dB)
1	12	√	PASS	-5.94	0.31	1.50	1.19
2	11	√	PASS	-6.18	0.30	1.50	1.20
3	10	√	PASS	-5.38	0.50	1.50	1.00
4	9	√	PASS	-6.26	0.46	1.50	1.04
5	8	√	PASS	-6.24	0.61	1.50	0.89
6	7	√	PASS	-5.87	0.43	1.50	1.07
7	6	√	PASS	-6.01	0.28	1.50	1.22
8	5	√	PASS	-6.48	0.64	1.50	0.86
9	4	√	PASS	-6.50	0.47	1.50	1.03
10	3	√	PASS	-6.41	0.30	1.50	1.20
11	2	√	PASS	-6.19	0.49	1.50	1.01
12	1	√	PASS	-6.04	0.31	1.50	1.19

Wavelength:1550nm

Local (Rx) Channel	Remote (Tx) Channel	Considered for P/F	Result	Absolute Power (dBm)	Loss (dB)	Limit (dB)	Margin (dB)
1	12	√	PASS	-6.56	0.45	1.50	1.05
2	11	√	PASS	-6.29	0.51	1.50	0.99
3	10	√	PASS	-6.74	0.50	1.50	1.00
4	9	√	PASS	-6.28	0.33	1.50	1.17
5	8	√	PASS	-6.93	0.33	1.50	1.17
6	7	√	PASS	-6.45	0.35	1.50	1.15
7	6	√	PASS	-6.60	0.34	1.50	1.16
8	5	√	PASS	-6.56	0.59	1.50	0.91
9	4	√	PASS	-6.97	0.33	1.50	1.17
10	3	√	PASS	-6.46	0.32	1.50	1.18
11	2	√	PASS	-6.50	0.47	1.50	1.03
12	1	√	PASS	-6.75	0.33	1.50	1.17

Sample MPOLx report from J-Reporter

Inspect All Fibers in an MPO Endface

Contaminated connectors are the #1 cause for troubleshooting in optical networks. This problem has driven the industry and International Electrotechnical Commission (IEC) to release IEC 61300-3-35, a global standard that establishes acceptance criteria for the quality and cleanliness of the fiber connector end face.
This standard has been widely adopted and incorporated into other standards including both TIA-568 and ISO/IEC 11801.

Without the right tools, comparing fiber connectors to a standard or specification is difficult and time consuming; however these challenges are eliminated with SmartClass Fiber tools. Whether using an industry standard or customer-specific requirements, the MPOLx-85P and a P5000i probe microscope makes it easy!

Inspect MPO cassettes with P5000i Probe Microscope

- Test and certify to industry standards without confusion
- Eliminate subjectivity with automated pass/fail analysis
- Get fast results from both the local and remote devices
- Instantly store both local and remote results on the local device
- Integrate results into your certification reports

Save time with the Integrated Patch Cord Microscope (PCM)

- Eliminates need to change tips
- Cuts inspection time in half
- Safely stores your test reference cords inside

Automated pass/fail analysis of MPO connector end faces

- Ensures objective analysis of connector end faces
- Tests to industry standards at the push of a button
- Results in seconds
- Locates defects and scratches
- Shows zone locations

MPO connector inspection with the integrated PCM

Included Test Cords Support Pinned and Unpinned Connector Configurations

MPO testing has many challenges that testing legacy duplex-based systems (such as LC) do not have. One of these is the pinned and un-pinned nature of MPO connectivity. To ensure fiber core alignment, one side of a connection is pinned, while the other is unpinned. This means the test cords need to be opposite of the system being tested. i.e. if the system is unpinned, the test cords must be pinned. Thankfully, IEC 61280-4-5 and TIA-526-28 address this and allow for the use of "gender neutral" test cords. VIAVI ensures you can test any type of connectivity by including MTP® PRO cords along with the needed tool and accessories to add and remove pins from the test cords as required.

MTP-PRO test cords and exchanger tool

Ordering Information

Description	Part Number
Stand Alone Items	
MPOLS-85 - Single mode, dual-wavelength source (1310/1550)	2329/11S
MPOLS-85P - Single mode, dual-wavelength source (1310/1550), with PCM	2330/11S
MPOLS-84 - Multimode, dual-wavelength source (850/1300)	2329/14S
MPOLS-84P - Multimode, dual-wavelength source (850/1300), with PCM	2330/14S
MPOLP-85 - Broadband power meter (850/1300/1310/1550)	2329/01S
MPOLP-85P - Broadband power meter (850/1300/1310/1550), with PCM	2330/01S
Kitted Packages	
Single mode loss kit (1310/1550), LS/PM, without P5000i probes	2329/21
Single mode loss kit (1310/1550), LS/PM, two P5000i probes	2329/31
Single mode loss kit (1310/1550), LS/PM with PCM, without P5000i probes	2330/21
Single mode loss kit (1310/1550), LS/PM with PCM, two P5000i probes	2330/31
Multimode loss kit (850/1300), LS/PM, without P5000i probes	2329/24
Multimode loss kit (850/1300), LS/PM, two P5000i probes	2329/34
Multimode loss kit (850/1300), LS/PM with PCM, without P5000i probes	2330/24
Multimode loss kit (850/1300), LS/PM with PCM, two P5000i probes	2330/34
Quad loss kit (850/1300, 1310/1550), SM LS, MM LS, PM, without P5000i probes	2329/25
Quad loss kit (850/1300, 1310/1550), SM LS, MM LS, PM, two P5000i probes	2329/35
Quad loss kit (850/1300, 1310/1550), SM LS, MM LS, PM with PCM, without P5000i probes	2330/25
Quad loss kit (850/1300, 1310/1550), SM LS, MM LS, PM with PCM, two P5000i probes	2330/35

Accessories and Related Products

Description	Part Number
Sidewinder Autofocus WiFi Microscope MPO Single Mode and Multimode Tips	FIT-FCSW-KIT2
MTP PRO Field Tool Polarity/Pin	MTPPRO-TOOL
Multimode MTP PRO Test Cord 2 m Polarity A	K3036
Single Mode MTP PRO Test Cord 2 m Polarity A	K3169
Single Mode MTP PRO Test Cord 2 m Polarity B	K3170
Cord Kit for MPOLx for testing 24f pinned Single Mode systems	2329/90.01
Cord Kit for MPOLx for testing 24f pinned Multimode systems	2329/90.02
Cord Kit for MPOLx for testing 24f unpinned Single Mode systems	2329/90.03
Cord Kit for MPOLx for testing 24f unpinned Multimode systems	2329/90.04

Notes:

- Standalone items include instrument, battery, and charger
- Kitted packages include MPO cleaning tool, carry case (soft and hands free), MTP PRO test cords and MTP PRO tool
- Quad kitted package includes: SM Source, MM Source, Broadband Power Meter (850/1300/1310/1550)
- PCM = Patch Cord Microscope
- All PCM instruments include appropriate FMAE adapter
- 24f Cord Kits include: 2 Y-cables, 2 adapters, and 1 24f-24f cord for setting reference

MPOLS-84P MPOLS-85P MPOLP-85P

P5000i

VIAVI Care Support Plans

Increase your productivity for up to 5 years with optional VIAVI Care Support Plans:

- Maximize your time with on-demand training, priority technical application support and rapid service.
- Maintain your equipment for peak performance at a low, predictable cost.

Plan availability depends on product and region. Not all plans are available for each product or in every region. To find out which VIAVI Care Support Plan options are available for this product in your region, contact your local representative or visit: viavisolutions.com/viavicareplan

Features

*5-year plans only

Plan	Objective	Technical Assistance	Factory Repair	Priority Service	Self-paced Training	5 Year Battery and Bag Coverage	Factory Calibration	Accessory Coverage	Express Loaner
BronzeCare	Technician Efficiency	Premium	✓	✓	✓				
SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓		
MaxCare	High Availability	Premium	✓	✓	✓	✓*	✓	✓	✓

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Get quick assistance without international delays.

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