

Data Sheet

VIAVI Single Fiber Insertion Loss and Return Loss Test System

mOLM-C1 with PCT-rm Application Framework for MAP Series

PCT-rm is a MAP-220 based Insertion Loss (IL) and Return Loss (RL) solution targeting single fiber connector applications in the lab and in manufacturing. It is part of the broader MAP-Series Passive Connector Test (PCT) solution family which provides test solutions across the entire connectivity eco-system.

Building on the heritage of the classic JDSU RM and RX meters, the PCT-rm leverages the industry standard optical continuous wave reflection (OCWR) test method. A patented real-time measurement engine enables measurement performance and speed that is independent of the number of measured wavelengths. Production throughput is maximized independent of measurement need. A full range of power meter connector adapters ensures the unit can be configured for all connectivity applications.

The PCT-rm is part of the extended MAP LightTest family of solutions for passive components and optical connectors. The Light Test series provides application specific, integrated test solutions that leverage the power of the VIAVI MAP System. Built with specialized modules and assemblies of Light Direct Modules.

Key Benefits

- Real-time high repeatability system for IL and RL
- Multi-language, simple user interface enables direct deployment on production lines
- PCT Control Centre, a PC application simplifying data management and report printing
- Modular design supporting Multimode (EF compliant), Single-mode, and tunable sources

Applications

- Single fiber connector manufacturing
- Qualification testing of connectors and simple broad band passive components

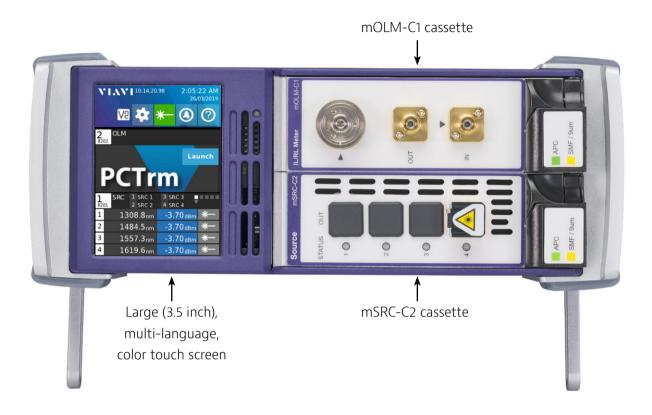
Safety Information

• Complies to CE, CSA/UL/IEC61010–1, LXI Class C requirements, meets the requirements of IEC 60825–1 (2014) Class 1M and complies with 21 CFR 1040.1 except deviations per Laser Notice No. 50, July 2001





The PCT-rm is delivered by combining the mOLM-C1 measurement module with an mSRC-C2 source module in a MAP-220C chassis, giving users all the capabilities they need for IL & RL testing in a compact system.



- Two slot, benchtop chassis gives customers full access to the broader MAP series system capabilities.
- LXI compliant LAN connectivity
- SCPI based remote commands over ethernet or an optional GPIB interface

- The PC based asset management tool enhances the ability to collect and centrally store data on remote network drives.
- Multiple USB ports enable the integration of a USB foot pedal device to creates a simple yet ergonomic solution for manufactures.

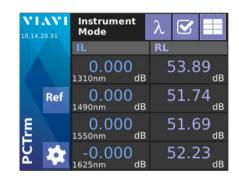
Measurement Modes

Instrument Mode

This measurement mode is designed to be always on and immediately available using the 3.5-inch LCD touch screen on the controller or though remote VNC. One touch referencing for IL and RL is simple and intuitive. Measurement resolution and averaging time are user controllable. The display can be configured to measure absolute power, insertion loss or insertion loss AND return loss.

Measurements are done in parallel with all 4 wavelength results reported in less than 0.5s. IL and RL are measured concurrently. A full range of on-board measurement management tolls are available to manage source integration and calibration. In this mode, an external light source (like a tunable laser) can configured and used.

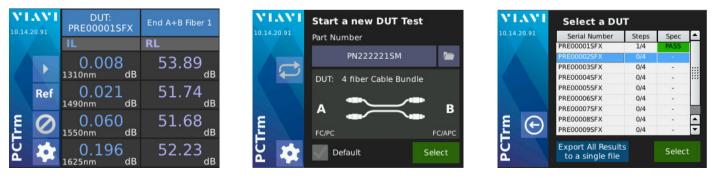




Simple large display shown in single and multi-wavelength mode. The capacitive touchscreen enables quick and efficient navigation.

Device Aware Mode

Unlike other instruments in this performance class, the PCT-rm is delivered with a fully integrated workflow automation mode. DUT definition files and serial numbers can be pre-loaded to deliver a full production automation environment. Connecting the PCT-rm to your corporate or instrument LAN enables test results to be automatically uploaded to a shared directory. The DUT definition files can be centralized and shared amongst multiple units. If rework is required, results can be reloaded on any unit matching the hardware profile required to execute the test.



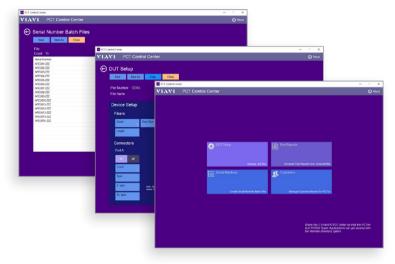
Example screens from DUT aware mode. Batch loads of serial numbers can be loaded. When testing the results can be frozen with a simple touch prior to uploading. Results may only be uploaded if the pass the DUT test criteria.

PCT Control Center

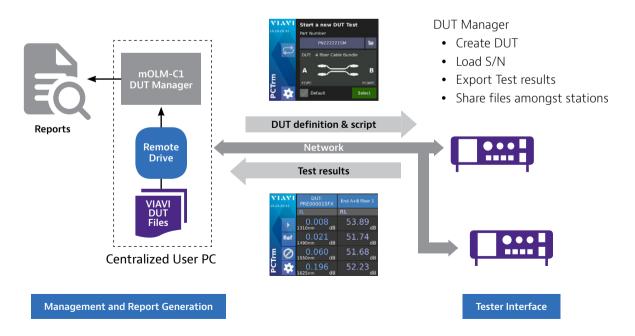
PCT Control Center is a free companion PC application, designed to maximize the value of the DUT Aware measurement mode. It is delivered standard with the PCT-rm.

A simple, easy to use PC interface enables creating, editing and managing DUT definition files, report templates and serial number batches. Files are saved to a shared directory and allows all PCT-rm units to use these files. If network connectivity is not available, USB storage media can be used to transfer the information. Test results can be uploaded, viewed, filtered and printed using both standard and editable HTML templates.

PCT Control Center is also compatible with the PCT-lite application which leverages the mORL-A1 measurement engine. Users who wish to migrate to mandrel-free testing, can continue to use the Control Center application and DUT files.



PCT Control Center is a simple PC application designed to simplify management of the PCT-rm and PCT-lite based IL and RL systems.



Multiple PCT-rm systems can share centrally managed and stored DUT definition files. Data is automatically uploaded to a shared directory and can be printed using the Control Center report engine.

Specifications

Wavelength 1310 / 1550 nm 1310 / 490 /1550 nm 1310 / 490 /1550 /1623 nm 850 / 1300 nm Wavelength Combinations / // 4 per IEC 61280 · 4 ·1 Power Meter // 4 per IEC 61280 · 4 ·1 Wavelength range 800 - 1650 nm Display resolutions 0.001 dB Display resolutions 0.001 dB Display resolutions 0.001 dB Display resolutions 0.001 dB Uncertainty A Reference Condition' +/- 3 pW Detector Return Loss (APC connector) > 65 dB Insertion Losi All wavelengths measured in 0.55 Measured concurrently with Return Loss Display resolution 0.001 dB +/- 0.04 dB Us - 40dB +/- 0.02 +/- 0.04 dB -40 to - 50dB +/- 0.02 Na Resurrence power) 0 0.01 dB 0 to - 40dB +/- 0.02 NA Repeatability (>-10dBm reference power) 0.01 dB 10 to 50 dB 0 to - 40dB +/- 0.02 NA <th>mOLM-C1 Cassette Optical Performance¹</th> <th></th> <th></th>	mOLM-C1 Cassette Optical Performance ¹			
Navelength Combinations ² 1310 / 1550 nm 1310 / 1550 nm 1310 / 1550 nm 850 / 1300 nm Wavelength accuracy + / 20 nm As per IEC 61280 -4-1 Power Meter 800-1650 nm As per IEC 61280 -4-1 Wavelength range 800-1650 nm SMF and MMF with NA < 0.27 Dynamic Range 6 dBm to -70 dBm User 100 mm Display resolutions 0.001 dB Uncertainty at Reference Condition ⁴ + / - 0.015 dB + /-5 pW Uncertainty due to polarization + /- 0.015 dB Noise + /- 3 0/k Additional uncertainty due to polarization + /- 3 0/k Max measurement speed (A lambda) Ma wavelengths measured in 0.55 Measured concurrently with Return Loss Measured concurrently with Return Loss Display resolution 0.001 dB Loud B +/- 0.004 dB Lineartin (J + - 0.05 dB +/- 0.04 dB +/- 0.04 dB Max measurement speed (A lambda) #/- 0.04 dB #/- 0.04 dB Display resolution 0.001 dB Loud B -/- 0.04 dB - 0.0 - 40 dB +/- 0.05 dB NA Researce 10 - 50 dB Repeatability (> -10dBm reference power) 0.01 dB -/- 0.005 - 0.0 - 50dB +/- 0.002 +/- 0.005 Max measurement speed (4 lambda) Max measurement speed (4 lambda) Max Display res	Parameters	SMF	MMF (50um)	
Wavelength Combinations**1310/1490/15S0/1625nm807/1300 nmWavelength accuracy+/- 20 nmWavelength range800-1650 nmFiber TypeSMF and MMF with NA < 0.27	Wavelength	· · · · · · · · · · · · · · · · · · ·		
Multimode Launch conditions As per IEC 61280-4-1 Power Meter 500-1650 nm Wavelength range 800-1650 nm Fiber Type SMF and MMF with NA < 0.27	Wavelength Combinations ²		850 / 1300 nm	
Power Meter B00-1650 nm Wavelength range 800-1650 nm Fiber Type SMF and MMF with NA < 0.27	Wavelength accuracy	+/- 20 nm		
Wavelength range 800-1650 nm Fiber Type SMF and MMF with NA < 0.27	Multimode Launch conditions		As per IEC 61280-4-1	
Fiber Type SMF and MMF with NA < 0.27	Power Meter			
Dynamic Range +6 dBm to -70 dBm Display resolutions 0.001 dB Uncertainty at Reference Condition ¹ +/- 0.015 dB +/-5 pW Uncertainty at Reference Condition ¹ +/- 8 0%. Additional uncertainty due to polarization +/- 0.015 dB Noise +/- 3 pW Detector Return Loss (APC connector) > 56 dB Insertion Loss ⁴	Wavelength range	800-1650 nm		
Display resolutions0.001 dBLinearity+/- 0.015 dB +/-5 pWUncertainty at Reference Condition¹+/- 3.0%Additional uncertainty due to polarization+/- 0.015 dBNoise+/- 3 pWDetector Return Loss (APC connector)> 65 dBInsertion Loss'Max measurement speed (ambda)All wavelengths measured in 0.5s Measured concurrently with Return LossDisplay resolution0.001 dBDisplay resolution0.001 dBDisplay resolution0.001 dBDisplay resolution0.001 dBO to - 40dB+/- 0.04 dBAccuracy (> -8dBm reference power)to - 60 dB- 40 to - 50dB+/- 0.05 dBAt measurement speed (ambda)+/- 0.005 dBAt to - 50dB+/- 0.005 dB- 40 to - 50dB+/- 0.005Return Loss'NAReturn Loss'NAReturn Loss'All wavelengths measured in 0.5s Measured concurrently with Insertion LossDisplay range10 to 0.02+/- 0.04 dB+/- 0.005- 40 dB+/- 0.005Max measurement speed (ambda)All wavelengths measured in 0.5s Measured concurrently with Insertion LossDisplay dynamic range10 to 80 dBDisplay range010 to 80 dBDisplay resolution0.01 dB	Fiber Type	SMF and MMF with NA < 0.27		
Linearity at Reference Condition? +/- 0.015 dB +/-5 pW Uncertainty at Reference Condition? +/- 3.0% Additional uncertainty due to polarization +/- 3.0% Additional uncertainty due to polarization +/- 0.015 dB Noise +/- 3.0W Detector Return Loss (APC connector) > 65 dB Insertion Loss' All wavelengths measured in 0.5s Max measurement speed (4 lambda) 0.001 dB Display resolution 0.001 dB Display range 0 to -60 dB Accuracy (> -8dBm reference power) 0 to -60 dB -40 to - 50dB +/- 0.04 dB +/- 0.04 dB -40 to - 50dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) /- 0.005 NA 0 to -40dB +/- 0.005 NA Return Loss' Max measurement speed (4 lambda) 10 to 50 dB Display dynamic range 10 to 8.0 dB 10 to 50 dB Display dynamic range 10 to 8.0 dB 10 to 50 dB Display resolution 0.01 dB	Dynamic Range	+6 dBm to -70 dBm		
Uncertainty at Reference Condition¹ +/- 30% Additional uncertainty due to polarization +/- 0015 dB Noise +/- 3 pW Detector Return Loss (APC connector) > 65 dB Insertion Loss* All wavelengths measured in 0.5s Measured concurrently with Return Loss Max measurement speed (4 lambda) All wavelengths measured in 0.5s Measured concurrently with Return Loss Display resolution 0.001 dB Display range 0 to -60 dB Accuracy (> -8dBm reference power) 0 to -60 dB 0 to - 40dB +/- 0.04 dB +/- 0.04 dB -40 to - 50dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) 0 0 0 to - 40dB +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.005 NA Return Loss' Max measurement speed (4 lambda) All wavelengths measured in 0.5s Measured concurrently with Insertion Loss Display dynamic range 10 to 80 dB 10 to 50 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) Udd to 50dB +/- 0.03 dB +/- 0.3 dB SodB to 50dB +/- 0.03 dB NA Gate to 70dB	Display resolutions	0.001 dB		
Additional uncertainty due to polarization +/- 0.015 dB Noise +/- 3 pW Detector Return Loss (APC connector) > 56 dB Insertion Loss ¹ All wavelengths measured in 0.5s Measured concurrently with Return Loss Display resolution 0.001 dB Display resolution 0.001 dB Accuracy (> -8dBm reference power) 0 to -60 dB Accuracy (> -8dBm reference power) +/- 0.04 dB +/- 0.04 dB -40 to - 50dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.005 NA Return Loss ⁴ 0 to 80 dB 10 to 50 dB Oto - 40dB +/- 0.03 dB 10 to 50 dB -40 to - 50dB NA NA Return Loss ⁴ Maxwelengths measured in 0.5s NA Max measurement speed (4 lambda) Mavelengths measured in 0.5s dB Io to 50 dB Display dynamic range 10 to 80 dB 10 to 50 dB Io to 50 dB Display colution 0.01 dB Accuracy (> -3dBm reference power) Io to 80 dB NA <tr< td=""><td>Linearity</td><td>+/- 0.015 dB +/-5 pW</td><td colspan="2">+/- 0.015 dB +/-5 pW</td></tr<>	Linearity	+/- 0.015 dB +/-5 pW	+/- 0.015 dB +/-5 pW	
Noise +/- 3 pW Detector Return Loss (APC connector) > 65 dB Insection Loss' All wavelengths measured in 0.5s Measured concurrently with Return Loss Display resolution 0.001 dB Display range 0 to -60 dB Accuracy (> -8dBm reference power) 0 to -60 dB 0 to - 40dB +/- 0.04 dB +/- 0.04 dB -40 to - 50dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) +/- 0.005 NA 0 to - 40dB +/- 0.005 NA Return Loss' Max measurement speed (4 lambda) All wavelengths measured in 0.5s Measured concurrently with Insertion Loss 0 to - 50dB +/- 0.005 NA Return Loss' All wavelengths measured in 0.5s Measured concurrently with Insertion Loss Display dynamic range 10 to 80 dB 10 to 50 dB Display resolution 0:01 dB Accuracy (> -8dBm reference power) 0:03 dB +/- 0.3 dB +/- 0.3 dB S0dB to 65dB +/- 0.4 dB NA S0dB to 65dB +/- 0.3 dB NA Repeatability (> -10dBm reference power) NA NA Codd B +/- 0.3 dB	Uncertainty at Reference Condition ³	+/- 3.0%		
Detector Return Loss (APC connector) > 65 dB Insertion Loss ⁴ All wavelengths measured in 0.5s Measured concurrently with Return Loss Display resolution 0.001 dB O to - 40dB +/- 0.04 dB Accuracy (> -8dBm reference power) +/- 0.05 dB O to - 40dB +/- 0.05 dB Repeatability (> -10dBm reference power) +/- 0.002 O to - 40dB +/- 0.002 +/- 0.005 At wavelengths measured in 0.5s Na Return Loss ⁴ Measured concurrently with Insertion Loss Display resolution 0.01 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) 10 to 80 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) 10 to 80 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) 10 to 80 dB Display resolution 0.01 dB SodB to 5dB	Additional uncertainty due to polarization	+/- 0.015 dB		
Insertion Loss ⁴ Max measurement speed (4 lambda) All wavelengths measured in 0.5s Measured concurrently with Return Loss Display resolution Display range 0 to - 60 dB Accuracy (> -8dBm reference power) 0 to - 40dB +/- 0.04 dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) 0 to - 60 dB +/- 0.002 +/- 0.005 NA Return Loss ⁴ Max measurement speed (4 lambda) All wavelengths measured in 0.5s Measured concurrently with Insertion Loss Display dynamic range 10 to s0 dB 10 to 50	Noise	+/- 3 pW		
Max measurement speed (4 lambda)All wavelengths measured in 0.5s Measured concurrently with Return LossDisplay resolution0.001 dBDisplay range0 to -60 dBAccuracy (> -8dBm reference power)0 to -60 dB0 to -40dB+/- 0.04 dB-40 to - 50dB+/- 0.05 dBRepeatability (> -10dBm reference power)NA0 to - 40dB+/- 0.002-40 to - 50dB+/- 0.005Add - 50dB+/- 0.005Add - 50dB+/- 0.005Adv to - 50dB	Detector Return Loss (APC connector)	> 65 dB		
Max measurement speed (4 iambda) Measured concurrently with Return Loss Display resolution 0.001 dB Display range 0 to - 60 dB Accuracy (> -8dBm reference power) 0 to - 60 dB 0 to - 40dB +/- 0.04 dB +/- 0.04 dB -40 to - 50dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.005 NA Return Loss' Max measurement speed (4 lambda) All wavelengths measured in 0.5 Max measurement speed (4 lambda) All wavelengths measured in 0.5 Measured concurrently with Insertion Loss Display dynamic range 10 to 80 dB 10 to 50 dB Display resolution 0.01 dB 10 to 50 dB Accuracy (> -8dBm reference power) 0.01 dB 10 to 50 dB Display resolution 0.01 dB 10 to 50 dB SodB to 65dB +/- 0.03 dB +/- 0.3 dB 65dB to -70dB +/- 0.02 dB NA CodB +/- 1.0 dB NA CodB +/- 0.02 dB +/- 0.3 dB SodB to 65dB <	Insertion Loss ⁴	·		
Display range Diversion O to - 40dB +/- 0.04 dB +/- 0.04 dB -40 to - 50dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) +/- 0.002 +/- 0.005 0 to - 40dB +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.005 NA Repeatability (> -10dBm reference power) +/- 0.005 NA 0 to - 40dB +/- 0.005 NA Return Loss* All wavelengths measured in 0.5* Measured concurrently with Insertion Loss Display range 10 to 80 dB 10 to 50 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) 10dB to 50dB +/- 0.03 dB +/- 0.03 dB 50dB to 65dB +/- 0.4 dB NA 65dB to -70dB +/- 0.04 dB NA 70dB to 75dB +/- 0.02 dB +/- 0.3 dB Repeatability (> -10dBm reference power) NA NA 70dB to 50dB +/- 0.02 dB NA 70dB to 75dB +/- 0.02 dB NA 70dB to 50dB +/- 0.02 dB NA	Max measurement speed (4 lambda)			
Accuracy (> -8dBm reference power) 0 to - 40dB +/- 0.04 dB +/- 0.04 dB -40 to - 50dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) +/- 0.002 +/- 0.005 0 to - 40dB +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.005 NA Return Loss* Max measurement speed (4 lambda) Max measurement speed (4 lambda) All wavelengths measured in 0.5s Measured concurrently with Insertion Loss Display dynamic range 10 to 80 dB 10 to 50 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) 10dB to 50dB +/- 0.03 dB +/- 0.3 dB 50dB to 65dB +/- 10 dB NA 65dB to -70dB +/- 0.02 dB +/- 0.3 dB 70dB to 75dB +/- 0.02 dB NA Repeatability (> -10dBm reference power) +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.02 dB +/- 0.3 dB 65dB to 70dB +/- 0.4 dB NA 65dB to 65dB +/- 0.4 dB NA 65dB to 65dB +/- 0.1 dB NA	Display resolution	0.001 dB		
0 to - 40dB +/- 0.04 dB +/- 0.04 dB -40 to - 50dB NA Repeatability (> -10dBm reference power) - 0 to - 40dB +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.005 NA Return Loss* -40 to - 50dB NA Return Loss* All wavelengths measured in 0.5 Measured concurrently with Insertion Loss Display dynamic range 10 to 80 dB 10 to 50 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) 10dB to 50dB +/- 0.03 dB +/- 0.3 dB 50dB to 65dB +/- 0.4 dB NA 65dB to -70dB +/- 0.02 dB NA Repeatability (> -10dBm reference power) +/- 0.02 dB NA 10dB to 50dB +/- 0.4 dB NA 65dB to -70dB +/- 0.02 dB NA Repeatability (> -10dBm reference power) +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.02 dB NA +/- 0.3 dB 65dB to 65dB +/- 0.4 dB NA +/- 0.3 dB 65dB to 65dB +/- 0.4	Display range	0 to -60 dB		
-40 to - 50dB +/- 0.05 dB NA Repeatability (> -10dBm reference power) +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.005 NA -40 to - 50dB +/- 0.005 NA Return Loss ⁴ Max measurement speed (4 lambda) All wavelengths measured in 0.5s Display dynamic range 10 to 80 dB 10 to 50 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) 10dB to 50dB +/- 0.03 dB +/- 0.3 dB 50dB to 65dB +/- 0.04 dB NA 65dB to -70dB +/- 2.0 dB NA Repeatability (> -10dBm reference power) +/- 2.0 dB NA 10dB to 50dB +/- 0.02 dB +/- 0.3 dB 50dB to 65dB +/- 0.02 dB NA 65dB to 70dB +/- 0.02 dB NA 65dB to 50dB +/- 0.3 dB NA 65dB to 50dB +/- 0.02 dB NA 65dB to 65dB +/- 0.02 dB NA 65dB to 70dB +/- 0.4B NA	Accuracy (> -8dBm reference power)			
Repeatability (> -10dBm reference power) +/- 0.002 +/- 0.005 0 to - 40dB +/- 0.005 NA -40 to - 50dB +/- 0.005 NA Return Loss ⁴ All wavelengths measured in 0.5× Measured concurrently with Insertion Loss Na Display dynamic range 10 to 80 dB 10 to 50 dB Display resolution 0.01 dB	0 to - 40dB	+/- 0.04 dB	+/- 0.04 dB	
0 to - 40dB +/- 0.002 +/- 0.005 -40 to - 50dB +/- 0.005 NA Return Loss* All wavelengths measured in 0.5- Measured concurrently with Insertion Loss Max measurement speed (4 lambda) All wavelengths measured in 0.5- Measured concurrently with Insertion Loss Display dynamic range 10 to 80 dB 10 to 50 dB Display resolution 0.01 dB Accuracy (> -8dBm reference power) 10dB to 50dB +/- 0.03 dB +/- 0.3 dB 50dB to 65dB +/- 0.4 dB NA 65dB to -70dB +/- 0.02 dB NA Repeatability (> -10dBm reference power) +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.02 dB NA 65dB to 70dB +/- 0.02 dB NA	-40 to - 50dB	+/- 0.05 dB	NA	
-40 to - 50dB+/- 0.005NAReturn Loss*Max measurement speed (4 lambda)All wavelengths measured in 0.5 Measured concurrently with Insertion LossDisplay dynamic range10 to 80 dB10 to 50 dBDisplay resolution0.01 dBAccuracy (> -8dBm reference power)0.01 dB10dB to 50dB+/- 0.03 dB+/- 0.3 dB50dB to 65dB+/- 0.4 dBNA65dB to -70dB+/- 10 dBNA70dB to 75dB+/- 2.0 dBNARepeatability (> -10dBm reference power)+/- 0.02 dB+/- 0.3 dB50dB to 65dB+/- 0.02 dB+/- 0.3 dB65dB to 70dB+/- 0.02 dBNA65dB to 70dB+/- 0.02 dBNA	Repeatability (> -10dBm reference power)			
Return Loss ⁴ Max measurement speed (4 lambda)All wavelengths measured in 0.5s Measured concurrently with Insertion LossDisplay dynamic range10 to 80 dB10 to 50 dBDisplay resolution0.01 dBAccuracy (> -8dBm reference power)0.03 dB+/- 0.3 dB10dB to 50dB+/- 0.03 dB+/- 0.3 dB50dB to 65dB+/- 0.4 dBNA65dB to -70dB+/- 10 dBNARepeatability (> -10dBm reference power)+/- 0.02 dB+/- 0.3 dB10dB to 50dB+/- 0.02 dBNA65dB to 65dB+/- 0.02 dBNA850dB to 65dB+/- 0.1 dB8NANA850dB to 65dB+/- 0.1 dB9NANA910 to 50 dB+/- 0.1 dB9NANA910 to 50 dB+/- 0.1 dB910 to 50 dB+/- 1.0 dB910 to 50 dB+/- 1.0 dB	0 to - 40dB	+/- 0.002	+/- 0.005	
Max measurement speed (4 lambda)All wavelengths measured in 0.5 Measured concurrently with Insertion LossDisplay dynamic range10 to 80 dB10 to 50 dBDisplay resolution0.01 dBAccuracy (> -8dBm reference power)0.01 dB10dB to 50dB+/- 0.03 dB+/- 0.3 dB50dB to 65dB+/- 0.4 dBNA65dB to -70dB+/- 1.0 dBNA70dB to 75dB+/- 2.0 dBNARepeatability (> -10dBm reference power)+/- 0.02 dB+/- 0.3 dB50dB to 65dB+/- 0.02 dBNA65dB to 70dB+/- 0.02 dBNA65dB to 70dB+/- 0.1 dBNA	-40 to - 50dB	+/- 0.005	NA	
Maximeastrement speed (4 nambda)Measured concurrently with Insertion LossDisplay dynamic range10 to 80 dB10 to 50 dBDisplay resolution0.01 dBAccuracy (> -8dBm reference power)	Return Loss ⁴	· · · · · · · · · · · · · · · · · · ·		
Display resolution 0.01 dB Accuracy (> -8dBm reference power)	Max measurement speed (4 lambda)	All wavelengths measu Measured concurrently	All wavelengths measured in 0.5s Measured concurrently with Insertion Loss	
Accuracy (> -8dBm reference power) 10dB to 50dB +/- 0.03 dB +/- 0.3 dB 50dB to 65dB +/- 0.4 dB NA 65dB to -70dB +/- 1.0 dB NA 70dB to 75dB +/- 2.0 dB NA Repeatability (> -10dBm reference power) +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.02 dB +/- 0.3 dB 50dB to 65dB +/- 0.02 dB NA	Display dynamic range	10 to 80 dB	10 to 50 dB	
10dB to 50dB +/- 0.03 dB +/- 0.3 dB 50dB to 65dB +/- 0.4 dB NA 65dB to -70dB +/- 1.0 dB NA 70dB to 75dB +/- 2.0 dB NA Repeatability (> -10dBm reference power) +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.02 dB +/- 0.3 dB 50dB to 65dB +/- 0.1 dB NA	Display resolution	0.01 dB		
50dB to 65dB +/- 0.4 dB NA 65dB to -70dB +/- 1.0 dB NA 70dB to 75dB +/- 2.0 dB NA Repeatability (> -10dBm reference power) +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.4 dB NA 50dB to 65dB +/- 0.4 dB NA	Accuracy (> -8dBm reference power)			
65dB to -70dB +/- 1.0 dB NA 70dB to 75dB +/- 2.0 dB NA Repeatability (> -10dBm reference power) +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.4 dB NA 50dB to 65dB +/- 1.0 dB NA	10dB to 50dB	+/- 0.03 dB	+/- 0.3 dB	
70dB to 75dB +/- 2.0 dB NA Repeatability (> -10dBm reference power) -10dB to 50dB +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.4 dB NA 50dB to 65dB +/- 1.0 dB NA	50dB to 65dB	+/- 0.4 dB	NA	
Repeatability (> -10dBm reference power) +/- 0.02 dB +/- 0.3 dB 10dB to 50dB +/- 0.4 dB +/- 0.3 dB 50dB to 65dB +/- 0.4 dB NA 65dB to 70dB +/- 1.0 dB NA	65dB to -70dB	+/- 1.0 dB	NA	
10dB to 50dB +/- 0.02 dB +/- 0.3 dB 50dB to 65dB +/- 0.4 dB NA 65dB to 70dB +/- 1.0 dB NA	70dB to 75dB	+/- 2.0 dB	NA	
50dB to 65dB +/- 0.4 dB NA 65dB to 70dB +/- 1.0 dB NA	Repeatability (> -10dBm reference power)	· · ·	· · · · · · · · · · · · · · · · · · ·	
65dB to 70dB +/- 1.0 dB NA	10dB to 50dB	+/- 0.02 dB	+/- 0.3 dB	
	50dB to 65dB	+/- 0.4 dB	NA	
70dB to 75dB +/- 2.0 dB NA	65dB to 70dB	+/- 1.0 dB	NA	
	70dB to 75dB	+/- 2.0 dB	NA	

All optical measurements performed 60 minutes after power on in a controlled environment of 23±2°C. All uncertainties are 2σ values unless otherwise stated. Specifications not guaranteed outside operating wavelength limit of the optical power meter. The mSRC-C2 and mOLM-c1 shall be connected with the rigid jumper supplied with the system.

2. Peak wavelength defined per IEC 61280-1-3 2010 clause 3.1.3.

3. Power meter reference condition: Input fiber SMF-28, T= 23 \pm 5°C, spectral width of source < 6nm, -20dBm input power

4. Tested in wavelength cycling mode using specified mSRC-C2, performed within 5min of an IL reference and observed over 15min, ignores any PDL contribution from DUT

Specifications Continued

Dimensions (W x H x D)220 x 88.2 x 387 mm (8.66 x 3.47 x 15.24 in)Weight8 kg (176 lbs)ControllerCPU ARM AM335x Linux OS 4GB user flash memory Field replaceable (co-packaged with Power supply)	
CPU ARM AM335x Linux OS 4GB user flash memory Field replaceable (co-packaged with Power supply)	
Controller Linux OS 4GB user flash memory Field replaceable (co-packaged with Power supply)	
Display 3.5-inch color screen 320 x 240 resolution	
Remote interfaceEthernet 10/100/1000Base-T GPIB (optional)	
USB device support Mouse, keyboard, memory stick, foot pedal	
Power and Safety	
100 to 240 V AC, 50/60 Hz Power Supply Auto-switching Field replaceable (co-packaged with controller)	
Power consumption 160 VA	
Local Laser interlock Software password controlled	
Environmental	
Operating temperature 10 to 40°C	
Storage temperature -30 to 60°C	
Relative humidity 5 to 85% noncondensing	

Configurations and Ordering Information

The PCT-rm ships in a preconfigured package with all the required elements including the MAP-220C mainframe, mOLM-C1 measurement module and applicable mSRC-C2. Other configurations are possible. For more information on this or other products and their availability, 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.

Order Code ¹	MAP-220 IL/RL Meter Variants			
Single Mode Fiber, Dual Wavelength				
MAP-RM-C13500FB-M100-MFA	1310/1550nm Basic FP laser, FC/APC			
MAP-RM-C13500FP-M100-MFA	1310/1550nm FP laser with Temperature Control, FC/APC			
MAP-RM-C13456FP-M100-MFA	1310/1490/1550/1625nm FP laser with Temperature Control, FC/APC			
50um Multimode Fiber Solution				
MAP-RM-C11308LP-M101-MFA	850/1300nm LED 50um MMF EF compliant, FC/APC			

1. All systems include the interconnection jumper to connect mSRC and mOLM modules and one FC style power meter adaptor

The table below highlights commonly ordered options and spare parts. In addition, a complete range of single ferrule, duplex, bare fiber power meter adaptors and matting sleeves are available. VIAVI also offers a range of connector inspection tools. For additional options please contact your VIAVI Solutions sales consultant.

Accessories (Optional)	Description	
MAP-200CGPIB-A	GPIB Interface Option	
MAP-200C01	Rack-mount conversion kit	
MAP-200C02	Benchtop conversion kit	
MAP-200CLD-A	Replacement LightDirect Controller	
MAP-200A020	Hardened inter-connection jumper, SMF, FC/APC	
MAP-200A021	Hardened inter-connection jumper, OM3, FC/PC	
AC500	Replacement bulkhead adapter FC/PC	
AC502	Replacement bulkhead adapter FC/APC	



MAP-200A20 hardened interconnect jumper



Power meter adaptors



Contact Us +1 844 GO VIAVI (+1 844 468 4284)

To reach the VIAVI office nearest you, visit viavisolutions.com/contact

© 2019 VIAVI Solutions Inc. Product specifications and descriptions in this document are subject to change without notice. mOLM-c1-pct-rm-ds-lab-nse-ae 30187741 900 0719