

NEW

Multi-Port Optical Power Meter

MPM-210H (Main Frame)

MPM-211 (4ch power meter)

MPM-212 (2ch power meter)

MPM-213 (4ch current meter)

**MPM-215 (High dynamic range
4ch power meter)**

The MPM-210H is a new multi-port optical power meter that is perfect for measuring the optical characteristics of multi-port optical devices. The MPM-210H can simultaneously measure up to 20 ports (4 ports per MPM-211 module) very fast with high resolution. It features high accuracy, high linearity, and extremely low polarization-dependent sensitivity with power levels from -80 to +10 dBm (-70 to +5 dBm@MPM-215) over a wavelength range of 1250-1650 nm. GPIB, TCP/IP and RS-232C interfaces provide a convenient automated measurement solution.

The MPM-210H is ideal for IL and PDL measurement of multi-port optical components including Dense Wavelength Division Multiplexing (DWDM), AWG, Wavelength Selective Switches (WSS) and more. When combined with a santec TSL-Series laser equipped with a power monitor output, the MPM-210H allows the user to complete high precision IL measurements while referencing in real-time. In particular, the MPM-215 is suitable for high-speed measurement of optical components with a dynamic range of 50 dB or more.

Seeing as the new MPM-210H multi-port optical power meter is command compatible with the previous MPM-210 model, switching to the new MPM-210H is as simple as swapping out your devices.



MPM-211/-212/-213/-215 (Modules)

First-class features (benefits)

- ▶ High speed measurement
 - Up to 1 million logging sampling points per port
 - 2 memory buffers per port
 - Fast measurement (100 kHz) with high resolution
 - Fast data transfer
- ▶ High dynamic range (logging mode)
 - Typically 50 dB per scan /MPM-211, 212, 213
 - Typically 70 dB per scan /MPM-215

Features

- ▶ Wavelength Range 1250 - 1650 nm
- ▶ Power meter module (MPM-211/212)
 - Dynamic power range -80 to +10 dBm
- ▶ Power meter module (MPM-215)
 - Dynamic power range -70 to +5 dBm
- ▶ Current meter module (MPM-213)
 - Dynamic power range -70 to +10 dBmA
- ▶ Up to 20 ports measurement
- ▶ Analog output (MPM-212)

Applications

- ▶ Optical power measurements
- ▶ IL and PDL measurements

Specifications

Main frame, MPM-210H

Parameter	Unit	Specifications	Notes
Module number	-	Up to 5	
Interface	For Power meter	GP-IB, Ethernet, RS-232C	
	For System	USB	
Trigger input	-	TTL(3.3 V)	BNC
Trigger output	-	TTL(3.3 V)	BNC
Power monitor	V	0 to 3	BNC
Supply voltage	V	AC 100 to 240, 50/60 Hz	
Maximum power consumption	VA	50	
Operating temperature	°C	10 to 40	
Operating humidity	%	< 80	non condensing
Weight	kg	6	
Dimensions (W) x (D) x (H)	mm	210 x 350 x 133	

Power meter module, MPM-211(4ch), MPM-212(2ch), MPM-215 (4ch)

Parameter	Unit	MPM-211	MPM-212	MPM-215 *1	Notes
Sensor element	-	InGaAs			
Wavelength range	nm	1250 to 1680			
Specification wavelength range	nm	1250 to 1630			
Power dynamic range	dBm	-80 to +10		-70 to +5	
Dynamic range @Fixed gain (typ.) *2, 3	dB	45		70	Logging mode
Number of gain range	-	5		1	
Maximum safe power	dBm	+16			
Total uncertainty	%	+/-5 @ -60 to 9 dBm		+/-5 @ > -55 dBm	
Power resolution	dB	0.001			
Linearity *2, 4	dB	+/-0.03 @ -55 to 9 dBm		+/-0.02 @ > -40 dBm +/-0.05 @ > -50 dBm	
Polarization dependent responsivity (typ.) *2, 5	dB	< 0.025			@ 1525-1585 nm
		< 0.03			@ 1270-1630 nm
Averaging time	sec	10 μ to 10			
Data logging capability	-	1,000,000 x 2buffer per port			
Port number per module	-	4 Ports	2 Ports	4 Ports	
Analog output *6	-	None	With	None	
Connector type	-	FC			

Current meter module, MPM-213

Parameter	Unit	Specifications	Notes
Current dynamic range	dBmA	-70 to +10 @ 100pA to 10 mA	
Dynamic range @Fixed gain (typ.) *2, 3	dB	45 dB	Logging mode
Number of gain range	-	4	
Maximum safe power	dBmA	16	
Total uncertainty	%	+/-5 @ -45 to 9 dBmA	Averaging time > 10ms
		+/-1 @ > -35 dBm (typ.)	Averaging time > 10ms
Power resolution	dB	0.001	
Linearity	dB	+/-0.03 @ -45 to 9 dBmA	Averaging time > 10ms
Averaging time	sec	10 μ to 10	
Data logging capability	-	1,000,000 per port x2	
Port number per module	-	4 ports	
Connector type	-	BNC Connector	
Reverse Bias Voltage	V	-	

*1: 1: This module is not compatible with other modules on a same Main Frame. *2: Temperature: 23 $\pm$ 5 °C,

*3: Averaging time >50us, Within $\pm$ 1 °C after zeroing, At gain 1, 2 or 3 for MPM-211/212

*4: For MPM-211/212, Averaging time >100ms, Auto range mode, For MPM-215, Averaging time >30us

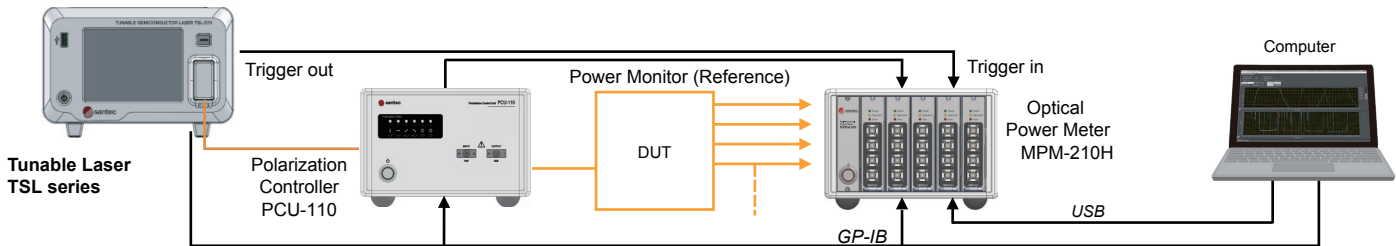
*5: SMF, Straight connector *6: Output voltage 0 to 2V, Measurement dynamic range >30dB (typ.)

Common information for module

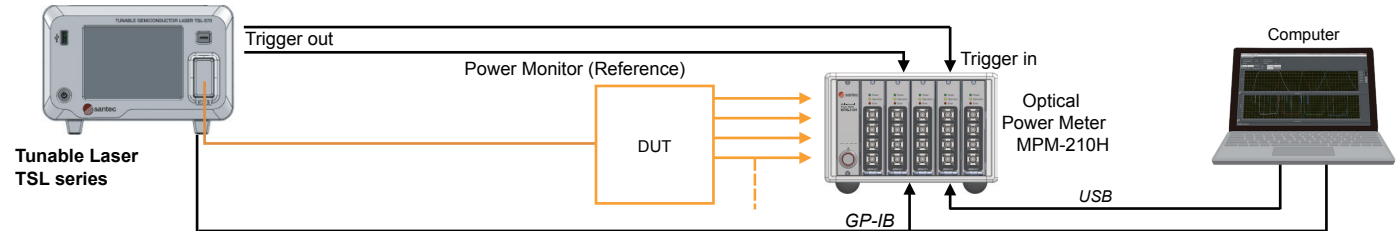
Parameter	Unit	Specifications	Notes
Operating temperature	°C	10 to 40	
Operating humidity	%	< 80	non condensing
Dimensions (W) x (D) x (H)	mm	30.3 x 183.5 x 114.8	Connectors are not included.

■ Typical swept test system configuration

IL/PDL measurement setup with the polarization controller PCU-110 and the power meter MPM-210H



IL measurement setup with the power meter MPM-210H



■ Ordering Code

Main frame	MPM-210H				
Module					
4 port power meter	MPM-211	- ☐ - ☐	2 port power meter	MPM-212	- ☐ - ☐
		A B			A B
		Connector Type : F : FC			Connector Type : F : FC
		Port: 04			Port: 02
4 port current meter	MPM-213	- ☐ - ☐	4 port power meter	MPM-215	- ☐ - ☐
		A B			A B
		Connector Type : B : BNC			Connector Type : F : FC
		Port: 04			Port: 04

Contact information



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