

# Optical Multi Tester

## OMT Series

- Power sensor, optical attenuator and optical switch
- Power sensor with wavelength monitoring function
- Flexible customization base on application needs

Power measurement	Wavelength measurement	Attenuator	Optical switch	Touch panel	Analog output
Remote control	GPIO	Ethernet			



Optical attenuator unit  
**OMT-1410**

Power sensor unit  
**OMT-1331**

Mainframe  
**OMT-1110**

## Mainframe

### OMT-1110



Note: Units are not included.

Slot type mainframe  
2 units can be implemented to this mainframe based on your application needs.  
Automatic measurement system is easily built with other instruments by using GPIO and Ethernet remote control interface.

	OMT-1110	unit
Number of slots	2	
PC interface	GPIO, Ethernet	
Operating temperature	+5 ~ +35	°C
Storage temperature	-10 ~ +50	°C
Power supply	AC 100-240 (50 / 60 Hz)	V
Power consumption	100	VA
Dimension (W x H x D) <sup>1</sup>	235 x 88 x 380	mm
Weight	4.8	kg

1. Protruding parts not included.

The above specifications may change without prior notice.

## Power sensor with wavelength monitor

### OMT-1360 - xx

Ordering Information  
xx : Connector adapter  
FC, SC, LC  
Note: Additional connector adapter is available in option.



Note: Connect to interface unit to use.

Power sensor with wavelength monitor  
**OMT-1360**

Built-in wavelength monitor sensor head  
This sensor head can measure optical power and wavelength at the same time.  
The wavelength setting for the exact power measuring, will be done automatically, and it is very useful for reducing production takt time.  
This unit also has an analog output connector (BNC) to meet various application needs.

	OMT-1360	unit
Power measurement	Wavelength range	1000 ~ 1650 nm
	Power range	-70 ~ +20 dBm
	Uncertainty at reference condition (1260 ~ 1630 nm)	+/-3 %
	Total uncertainty (1260 ~ 1630 nm)	+/-5 % +/-50 pW
	Polarization dependency	< +/-0.015 dB
	Linearity (CW: -50 ~ +20 dBm)	< +/-0.02 dB
	Return loss	> 40 dB
	Noise level	< 50 pW
	Analog output	1 ch
	Wavelength measuring range	1000 ~ 1650 nm
Wavelength measurement	Wavelength measuring power range	-40 ~ +20 dBm
	Wavelength wavelength displaying resolution	0.01 nm
	Uncertainty (1000 ~ 1650 nm)	+/-1.0 nm
	(1260 ~ 1340, 1520 ~ 1630 nm)	typ. 0.1 (<+/-0.2) nm
	Polarization dependency	< +/-0.1 nm
	Optical fiber	SMF nm
	Optical connector	FC or SC or LC, SPC or APC
	Dimension (W x H x D) <sup>1</sup>	85 x 65 x 120 mm
	Weight	0.9 kg

1. Protruding parts not included.

The above specifications may change without prior notice.

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## Power sensor

### OMT-133# - xx

#### Ordering Information

# : Channel    xx : Connector adapter  
1ch : 0 , 2ch : 1    FC , SC , LC  
Note: Additional connector adapter are available in option.



#### Analog output for all channels

Each of the power sensor has an analog output connector (SMB) on every channel. The output voltage corresponds to input optical power. This provides flexibility for various application needs.

	OMT-1330	OMT-1331	unit
Number of channel	1	2	
Wavelength range	1000 ~ 1700		nm
Power range	-80 ~ +10		dBm
Uncertainty at reference condition (1260 ~ 1630 nm)	+/- 3 %		
Total uncertainty (1260 ~ 1630 nm)	+/- 5 % +/- 5 pW		
Polarization dependency	< +/- 0.01		dB
Linearity (CW: -60 ~ +10 dBm)	< +/- 0.02		dB
Return loss	> 45		dB
Noise level	< 5		pW
Optical fiber	SMF, MMF (< NA0.275)		
Optical connector	FC or SC or LC, SPC or APC		
Dimension (W x H x D) <sup>1</sup>	32 x 83 x 335		mm
Weight	0.5	0.7	kg

1. Protruding parts not included.

The above specifications may change without prior notice.

## Optical attenuator

### OMT-1410 - xx

#### Ordering Information

xx : Connector  
FS : FC/SPC , SS : SC/SPC  
FA : FC/APC , SA : SC/APC



#### Maximum attenuation up to 60dB

This optical attenuator covers the wavelength of 1260 ~ 1630nm. The maximum attenuation range is 60dB with setting resolution of 0.01dB. The maximum handling power is +23dBm. By combining power sensor unit and optical switch unit makes it possible to construct automated optical measurement system.

	OMT-1410	unit
Wavelength range	1260 ~ 1630	nm
Insertion loss	Typ. 1.6	dB
Maximum attenuation setting	60	dB
Attenuation setting resolution	0.01	dB
Attenuation accuracy (1310, 1550 +/- 15 nm)	typ. +/- 0.5 (ATT setting: 0 ~ 30) typ. +/- 1.0 (ATT setting: 30 ~ 40)	dB
Attenuation repeatability	typ. +/- 0.1 (ATT setting: 0 ~ 30)	dB
Return loss	> 45	dB
Polarization dependency	< +/- 0.1 (ATT setting: 0 ~ 40)	dB
Maximum input power	+23	dBm
Shutter isolation	> 55	dB
Attenuation variable time (3 dB variable)	< 100	ms
Optical fiber	SMF	
Optical connector	FC or SC, SPC or APC	
Dimension (W x H x D) <sup>1</sup>	32 x 83 x 335	mm
Weight	0.7	kg

1. Protruding parts not included.

The above specifications may change without prior notice.

## Optical switch

### OMT-15## - xx

#### Ordering Information

## : Switch    xx : Connector  
11 : 1 x 2 , 20 : 1 x 4    FS : FC/SPC , SS : SC/SPC  
30 : 1 x 8 , 40 : 2 x 2    FA : FC/APC , SA : SC/APC



	OMT-1511	OMT-1520	OMT-1530	OMT-1540	unit			
Configuration	1 x 2	1 x 4	1 x 8	2 x 2				
Number of switch	2	1	1	1				
Wavelength	1310 / 1550				nm			
Insertion loss (typ.)	0.5 (> 1.0)	0.9 (< 1.2)	0.9 (< 1.5)	0.5 (< 1.0)	dB			
Repeatability	< +/-0.01				dB			
Crosstalk	< -55	< -60			dB			
Return loss	> 45				dB			
Polarization dependency	< +/-0.02				dB			
Maximum input power	+23				dBm			
Optical fiber	SMF							
Optical connector	FC or SC, SPC or APC							
Dimension (W x H x D) <sup>1</sup>	32 x 83 x 335	32 x 83 x 335	64 x 83 x 335	32 x 83 x 335	mm			
Weight	0.6	0.7	1.0	0.6	kg			

1. Protruding parts not included.

The above specifications may change without prior notice.

#### Low insertion loss realization

This optical switch has low insertion loss of less than 0.9dB (typ.).

There are various types of switch configurations to suit various application needs.

## Options

- Connector adapter for power sensor (FC , SC , LC)
- Rack mount kit (RMT-010)
- Blank panel (BKP-011)

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## Applications

- Wide variety of measurement and evaluation for optical device and optical communication system
- Auto-measurement system for production test
- Optical experiment
- Insertion loss measurement