Multimode Fiber Interface (50/62.5 µm) MS9740A-009

Supported Optical Fiber		SM fiber (ITU-T G.652), 50 µm/125 µm GI fiber*1, 62.5 µm/125 µm GI fiber*1, PC Connector SM (ITU-T G.652), GI (50 µm/125 µm): reflection attenuation 40 dB or more, GI (62.5 µm/125 µm): reflection attenuation 38 dB or more
Optical Connector		User replaceable: FC, SC, ST, DIN (All connectors are PC polished.)
Wavelength Measurement Range		600 nm to 1750 nm
Wavelength Accuracy*2		±50 pm (1530 nm to 1570 nm)*3, ±100 pm (1530 nm to 1570 nm)*4 ±300 pm (600 nm to 1750 nm)*5
Wavelength Stability*2		±5 pm (1 min, smoothing: 11 pt, at center wavelength of half maximum, Using SM fiber)
Setting Resolution		0.07, 0.1, 0.2, 0.5, 1.0 nm
Resolution Accuracy*2		±30% (Resolution: 0.1 nm), ±15% (Resolution: 0.2 nm), ±7% (Resolution: 0.5 nm) After Res-cal, using SM fiber, 633/1310/1550 nm
Measurement Range*2		–65 to +10 dBm (600 nm to 1000 nm), –85 to +10 dBm (1000 nm to 1250 nm), –90 to +10 dBm (1250 nm to 1600 nm), –75 to +10 dBm (1600 nm to 1700 nm), –55 to +10 dBm (1700 nm to 1750 nm) [5° to 30°C, VBW: 10 Hz, Sweep average: 10, Resolution: 0.07 nm to 1.0 nm, using SM fiber, Optical Att: Off]
		–60 to +10 dBm (600 nm to 1000 nm), –80 to +10 dBm (1000 nm to 1250 nm), –85 to +10 dBm (1250 nm to 1600 nm), –70 to +10 dBm (1600 nm to 1700 nm), –50 to +10 dBm (1700 nm to 1750 nm) [30° to 45°C, VBW: 10 Hz, Sweep average: 10, Resolution: 0.07 nm to 1.0 nm, using SM fiber, Optical Att: Off]
		–70 to +23 dBm (1100 nm to 1600 nm), [5° to 30°C, VBW: 10 Hz, Sweep average: 10, Resolution: 0.07 nm to 1.0 nm, using SM fiber, Optical Att: On]
		–65 to +23 dBm (1100 nm to 1600 nm), [30° to 45°C, VBW: 10 Hz, Sweep average: 10, Resolution: 0.07 nm to 1.0 nm, using SM fiber, Optical Att: On]
Level Accuracy*2		±0.6 dB (Wavelength: 1310 nm, 1550 nm, Input: –10 dBm, Resolution: 0.2 nm to 1.0 nm, using SM fiber, using master FC connector, 23 ±5°C)
Level Stability*2		±0.1 dB (1 min, Wavelength: 1550 nm, Input: –23 dBm, Resolution: 0.2 nm to 1.0 nm, no polarization fluctuation, using SM fiber, at stable room temperature)
Level Linearity*2		±0.1 dB (Wavelength: 1550 nm, Input: –50 to 0 dBm, using SM fiber, Optical Att: Off) ±0.1 dB (Wavelength: 1550 nm, Input: –30 to +20 dBm, using SM fiber, Optical Att: On)
Dynamic Range*2		High dynamic range: 70 dB (1 nm from peak wavelength, 20° to 30°C), 60 dB (0.5 nm from peak wavelength, 20° to 30°C) 65 dB (1 nm from peak wavelength, 5° to 45°C), 55 dB (0.5 nm from peak wavelength, 5° to 45°C) Normal dynamic range: 62 dB (1 nm from peak wavelength, 20° to 30°C), 58 dB (0.5 nm from peak wavelength, 20° to 30°C) 57 dB (1 nm from peak wavelength, 5° to 45°C), 53 dB (0.5 nm from peak wavelength, 5° to 45°C) [Wavelength: 1550 nm, Resolution: 0.07 nm, using SM fiber, Optical Att: Off]
Optical Return Loss*2		32 dB (Wavelength: 1310 nm, 1550 nm, using SM fiber, Optical Att: Off)
Sweep*2		Sweep width: 0.2 nm to 1200 nm, 0 nm Sweep speed: ≤0.2 s (span: 5 nm, Resolution: 0.1 nm), ≤0.3 s (span: 500 nm) [VBW: 10 kHz, Normal dynamic range, center 1550 nm (span: 5 nm), 1200 nm (span: 500 nm), sweep start to stop, no optical input, sampling point: ≤501]
Display		800 × 600 dots, 8.4 inch SVGA color LCD
Function		Measurement functions: Auto Measure, Optical pulse measurement (External trigger), Power monitor Display functions: Normalized, Max Hold, Min Hold, Overlap, Value in Air/Vacuum, Effective Resolution, Multi fiber mode Analysis functions: Wavelength Subtraction, Marker, Wavelength Analysis (Threshold, ndB-Loss, Envelope, RMS, SMSR, Spectrum Power), Light Source Evaluation (FP-LD, DFB-LD, LED, LD Module), Optical AMP NF Evaluation, PMD Measurement, WDM Signal Evaluation, WDM Filter Analysis Calibration functions: Auto Align, Wavelength cal., Level offset, Wavelength offset Memory function: Display measurement data to memory A to J (10 waveforms) Interfaces: Ethernet, GPIB (Option) Input/Output function I/O: Save and read files to USB memory Input: External trigger terminal (0 to 0.8 V/2 V to 5 V, high impedance) Output: Measured data text file output, measurement screen file (BMP, PNG) output, VGA output
Operating Conditions		Operating temperature: +5° to +45°C, Storage temperature: –20° to +60°C, Relative humidity: 0 to 90% (no condensation)
Power Supply		100 V(ac) to 120 V(ac)/200 V(ac) to 240 V(ac), 50 Hz to 60 Hz, ≤75 VA
Dimensions and Mass		426 (W) × 177 (H) × 350 (D) mm (excluding projections), ≤15.0 kg (without options)
CE	EMC	2014/30/EU, EN61326-1, EN61000-3-2
	LVD	2014/35/EU, EN61010-1
	RoHS	2011/65/EU, EN50581

∗1: The NA is 0.2 for 50 µm/125 µm GI fiber and 0.275 for 62.5 µm/125 µm GI fiber.
∗2: Warm-up the instrument for at least 2 hours before measurement by performing repeated sweeping at span ≥100 nm, VBW = 10 kHz. Perform waveform calibration after auto-optical alignment (WI Cal) and keep the instrument at the same temperature unless stated otherwise. Use either SM fiber (ITU-T G.652) or GI fiber (50 µm/125 µm) with a return loss of >40 dB, or GI fiber (62.5 µm/125 µm) with a return loss of >38 dB.
∗3: Built-in MS9740A-002, after WI Cal (Ref), with SM fiber and resolution at 0.07 nm to 0.2 nm
∗4: Built-in MS9740A-002, after WI Cal (Ref), with SM fiber and resolution at 0.5 nm/1.0 nm
∗5: After WI cal (Ext) wavelength calibration execution by external light source, such as DFB-LD, using SM fiber or GI fiber (50 µm/125 µm or 62.5 µm/125 µm)

Light Source for Wavelength Calibration MS9740A-002

Supported Optical Fiber	SM fiber (ITU-T G.652)
Optical Connector	User replaceable: FC, SC, ST, DIN (All connectors are PC polished.)
Output Level	–40 dBm/nm (Reference wavelength, 10° to 30°C, Wavelength: 1550 nm ±20 nm, Resolution: 1 nm)
Output Level Stability	±0.04 dB (10 minutes after power-on, Wavelength: 1550 nm, Resolution: 1 nm, VBW: 100 Hz, Point Avg.: 20, Measurement time: 1 minute)
Laser Safety*	Class 1 (IEC 60825-1: 2007)

∗: Safety measures for laser products. This option complies with optical safety standards in Class 1 of IEC 60825-1; The following descriptive labels are affixed to the product.