Ando AQ2150
Optical Multimeter

**Limited Availability
Used and in Excellent Condition**

Open Web Page

https://www.artisantg.com/59805-11

Specifications

Base unit

Display	7-segment, 4-digit	Battery check	Low-battery display
Unit display	Absolute: dBm, mW, μW, nW, pW, relative: dB	Buzzer function	Operates when input level exceeds preset user-defined threshold
Calibration factor	Correction of sensor wavelength sensitivity (5 nm steps)	Resume function	Returns to state existing at power off
Ranges	Automatic or fixed (up/down)	Backup function	Backs up settings during battery replacement (about 8 hours)
Measurement mode	Selectable to CW light or chopped light (270 Hz/1 kHz/ 2kHz)	Analog output	0 to approx. +2 V (for each range)
Optical output waveform	Selectable to CW light or chopped light (270 Hz/1 kHz/ 2kHz)	Power supply	AC adapter, dry cells (AA cells), Ni-Cd battery (option), approx. 1 VA
Measurement interval	Approx. 330ms	Environmental conditions	Operating temperature 0 to 50 ˚C, storage temperature -25 to +70 ˚C, humidity 85 % RH max.
Averaging	Selectable, sequential average (10/50/100 times), on/off	Dimensions and mass	Approx. 88(W) x 205(H) x 43(D) mm, approx. 450 g (with DC pack, sensor unit and LED unit)
Display resolution	Selectable, 0.1/0.01		
Zero set	Automatic zero adjust		Approx. 88(W) x 265(H) x 43(D) mm, approx. 650 g (with dry cell battery pack and LD unit)
Relative measurement	Relative to reference setting value or displayed measurement value		
Backlight	Backlight on while key pressed, and for 5s after release	Accessories	DC pack, dry cell battery pack, AC adapter, analog output adapter, power cord (for AC adapter), instruction manual
Auto power off	Can be set to automatically shut down after 3 or 10 minutes without key operation, on/off		

Sensor unit

Model	AQ2750	AQ2751	AQ2752/2752B [1]	AQ2753	AQ2755	AQ2756
Unit name	Sensor Unit	Sensor Unit	Sensor Unit	Sensor Unit	Sensor Unit	Sensor Unit
Wavelength range	400 to 1100 nm	750 to 1800 nm	750 to 1700 nm	750 to 1800 nm	400 to 1100 nm	
Reference wavelength	850 nm		1310 nm		850 nm	
Photodetector	Si ○ 5.8 mm	Ge φ 5 mm	InGaAs φ 1 mm	Ge φ 1 mm	Si φ 18 mm	Si ○ 10 mm
Applications	Large-diameter fiber, free-space beam [2]		Small-diameter silica fiber emission [3]		Free-space beam	Large-diameter fiber, free-space beam [4]
Input type	Photodiode direct [5]		AQ9431(*) Connector Adapter: option [6]		Photodiode direct	Photodiode direct [7]
Power range CW light	-80 to +10 dBm, (10 pW to 10 mW)	-50 to +10 dBm, (10 nW to 10 mW)	-80 to +10 dBm, (10 pW to 10 mW)	-70 to +10 dBm, (100 pW to 10 mW)	-50 to +20 dBm, (10 nW to 100 mW)	-60 to +10 dBm, (1 nW to 10 mW)
Chopped light	-80 to +7 dBm, (10 pW to 5 mW)	-60 to +7 dBm, (1 nW to 5 mW)	-80 to +7 dBm, (10 pW to 5 mW) [8]	-70 to +7 dBm, (100 pW to 5 mW)	-50 to +17 dBm, (10 nW to 50 mW)	-60 to +7 dBm, (1 nW to 5 mW)
Noise level CW light	-70 dBm	-40 dBm	-70 dBm	-60 dBm [9]	-40 dBm	-50 dBm [9]
Chopped light	-75 dBm	-50 dBm	-75 dBm [8]	-63 dBm [9]	-45 dBm	-55 dBm [9]
Accuracy	± 5% (-20 dBm) [10]					

Notes
1: Select AQ2752 or 2752B in accordance with modulation frequency caused in case of installation, etc.   AQ2752: CW, 270 Hz, 1 kHz, 2 kHz or 100 MHz or more.   AQ2752B: CW, or 100 kHz or more.
    Can also be used with AQ9432(*) Connector Adapter (option). Please refer to order information for details.
2: Applicable optical fiber core diameter ≦ 200 mm, NA ≦ 0.44.
3: Applicable optical fiber core diameter ≦ 62.5 mm, NA ≦ 0.275.
4: Applicable optical fiber core diameter ≦ 0.4 mm, NA ≦ 0.5.
5: Can also be used with AQ9431(*) Connector Adapter. (*: Specify FC, SC, ST, DIN or HMS-10/A connector.)
6: * Specify FC, SC, ST, DIN or HMS-10/A connector. For information on other connectors, please consult your vendor or our sales offices.
7: Can also be used with AQ9317(*) Connector Adapter. *: connector type. FC standard. For information on other connectors, please consult your vendor or our sales offices.
8: Exclusively applicable to AQ2752.
9: At 0 to 40 ˚C.
10: Ta=23 ˚C, CW light, At reference wavelength.

Light source unit (LED)

Model	AQ4250 (085)	AQ4250 (131)	AQ4250 (155)	AQ4250 (131/155)
Unit name	LED Unit	LED Unit	LED Unit	LED Unit
Emission device	LED			
Center wavelength	850 ± 30 nm [1]	1310 ± 30 nm [1]	1550 ± 35 nm [1]	1310/1550 ± 35 nm [1]
Applicable fiber	GI (50/125 μm)	GI (50/125 μm) / SM (10/125 μm)	SM (10/125 μm)	
Spectral halfwidth [2]	60 nm or less	140 nm or less	200 nm or less	140 nm or less (1310 nm), 200 nm or less (1550 nm)
Optical output level [3] GI	-15 dBm or more	-25 dBm or more	—	
SM	—	-40 dBm or more	-43 dBm or more	-42 dBm or more (1310 nm), -45 dBm or more (1550 nm)
Optical output level stability Temperature stability	0.3 dB or less [4]		0.3 dBm or less [5]	
Time stability	± 0.02 dB or less [6]			
Optical connector	AQ9433(*) Connector Adapter: option [7]			

Notes
1: Ta=23 ˚C, CW light.   2: Spectral halfwidth indicated as FWHM.   3: CW light.   4: 0 to 50 ˚C (8 hours).   5: 0 to 40 ˚C (8 hours).
6: Constant temperature, 5 minutes (one point between 20 and 30 ˚C).
7: * Specify FC, SC, ST, DIN or HMS-10/A connector. For information on other connectors, please consult your vendor or our sales offices.

Light source unit (LD)

Model	AQ4251 (131)	AQ4251 (155)	AQ4251 (131/155)	AQ4254A (165)
Unit name	LD Unit	LD Unit	LD Unit	DFB-LD Unit
Emission device	LD			DFB-LD
Center wavelength	1310 ± 20 nm [1]	1550 ± 20 nm [1]	1310 / 1550 ± 20 nm [1]	1650±5 nm [1]
Applicable fiber	SM (10/125 μm)			
Spectral width [2]	5 nm or less	10 nm or less	5nm or less (1310 nm), 10nm or less (1550 nm)	0.1 nm or less
Optical output level [3] GI	—			
SM	-6 dBm or more		-7 dBm or more	
Optical output level stability Temperature stability	1.0 dB or less [4]		1.0 dB or less [5]	3.0 dB or less
Time stability	± 0.05 dB or less [6]			Within ±0.2 dB [7]
Optical connector	AQ9434(*) Universal Adapter: option [8]			

Notes
1: Ta=23 ˚C, CW light.   2: Spectral width indicated as RMS (2 σ, -20 dB), Ta =23 ˚C, CW light   3: CW light.   4: 0 to 50 ˚C (8 hours).   5: 0 to 40 ˚C (8 hours).
6: Constant temperature, 5 minutes (one point between 20 and 30 ˚C).
7: For five minutes, SM (10/125 μm) 2 m output end of Angled PC.
8: * Specify FC, SC, ST, DIN or HMS-10/A connector. For information on other connectors, please consult your vendor or our sales offices.

Light source unit (visible LD)

Model		AQ4252A (063)
Unit name		Visible LD Unit
Emission device		LD
Wavelength		635 ± 10 nm [1]
Applicable fiber		SM (10/125 µm)
Spectral width [2]		10 nm or less
Optical output level [3]	GI	—
	SM	-3 ± 1.5 dBm
Optical connector		AQ9434(*) Universal Adapter: option [4]

Notes
1: Ta=23 ˚C, CW light.
2: Spectral width indicated as RMS (2 σ, -20 dB). Ta=23 ˚C, CW light.
3: Outputs are CW light and 2 Hz blinking ligit.
4: * Specify FC, SC, ST, DIN or HMS-10/A connector. For information on other connectors, please consult your vendor or our sales offices.
5: Sensor unit can be mounted. With blinking ligit (2 Hz) function.

Return loss unit

Model	AQ7350 (131)	AQ7350 (155)
Unit name	Return Loss Unit	Return Loss Unit
Wavelength	1310 ± 20 nm [1]	1550 ± 20 nm [1]
Dynamic range	40 dB [2]	
Relative measurement accuracy	± 0.5 dB or less (0 to 40 dB) [3]	
Self-reflective attenuation	65 dB or more [4]	
Applicable fiber	SM (10/125 µm)	
Optical connector	AQ9434(*) Universal Adapter: option [5]	

Notes
1: Ta=23 ˚C.
2: Atmospheric standard, with Super-PC master connector connected to output terminal.
3: Reference reflectivity used as absolute for accuracy, including effects of self-reflective attenuation.
4: Excluding output connector reflectivity. Splitter/coupler directivity.
5 :* Specify FC, SC, ST, DIN or HMS-10/A connector. For information on other connectors, please consult your vendor or our sales offices.
6: Sensor unit cannot be mounted.

Order information

Model & product name	Notes
AQ2150 A Optical Multimeter	
AQ2750 Sensor Unit	Can be used with AQ9431 (*) Connector Adapter (option)
AQ2751 Sensor Unit	(*: Specify FC, SC, ST, DIN or HMS-10/A connector)
AQ2752/2752B Sensor Unit	Select AQ9431 (*) Connector Adapter (option)
	(*: Specify FC, SC, ST, DIN or HMS-10/A connector)
	Can be used with AQ9432 (*) Connector Adapter (option). Use for measurement which requires high output and high return loss. Capable of high output measurement up to +21 dBm without operating shutdown function of system with EDFA.(*: FC, SC)
AQ2752/2752B Sensor Unit Option 01	Use with AQ9432 (*) Connector Adapter (*: FC, SC) (Cannot be removed. The power is calibrated at the factory.)
AQ2753 Sensor Unit	Select AQ9431 (*) Connector Adapter (option) (*: Specify FC, SC, ST, DIN or HMS-10/A connector)
AQ2755 Sensor Unit	
AQ2756 Sensor Unit	Can be used with AQ9317 (*) Connector Adapter (option) (*: FC standard)
AQ4250(085) LED Unit	
AQ4250(131) LED Unit	Select AQ9433 (*) Connector Adapter (option)
AQ4250(155) LED Unit	(*: Specify FC, SC, ST, DIN or HMS-10/A connector)
AQ4250(131/155) LED Unit	
AQ4251(131) LD Unit	
AQ4251(155) LD Unit	
AQ4251(131/155) LD Unit	Select AQ9434 (*) Universal Adapter (option)
AQ4252A(063) Visible LD Unit	(*: Specify FC, SC, ST, DIN or HMS-10/A connector)
AQ4254A(165) DFB-LD Unit	
AQ7350(131) Return Loss Unit	
AQ7350(155) Return Loss Unit	

Model & product name	Notes
AQ9302(*) Bare Fiber Adapter	An adapter to convert optical fiber core cord to optical fiber with plug. Easy connection to AQ9431 Sensor with connector adapter. ( ): cord diameter. For information on cord diameters, please consult your vendor or our sales offices.
AQ9431(*) Connector Adapter	For sensor unit (*: Specify FC, SC, ST, DIN or HMS-10/A connector)
AQ9432(*) Connector Adapter	High-return loss adapter for AQ2752/2752B Sensor Unit (*: FC, SC) Return loss: 40 dB or more, internal return loss board with 13 dB Applicable fiber: SM (1.31 µm, 1.55 µm)
AQ9433(*) Connector Adapter	For LED light source unit (*: Specify FC, SC, ST, DIN or HMS-10/A connector)
AQ9434(*) Universal Adapter	For LD light source unit and return loss unit (*: Specify FC, SC, ST, DIN or HMS-10/A connector)
AP2103B Charger	
AP2104 Ni-Cd Battery Pack	Requires the AP2103B Charger
AQ2008 Sensor Cable	Extension cable
AZ8115 Soft Case	Storage: Base unit (with sensor unit and LED unit mounted), sensor unit, light source unit, accessories (free storage) Dimensions: approx. 280(W) x 210(H) x 175(D) mm
AZ8116 Carrying Case	Storage: Base unit (with sensor unit and LED unit mounted), LD unit (or return loss unit), six connector adapters, two DC packs (or dry cell pack, Ni-Cd battery pack), AP2103B Charger, AC adapter (or base unit), cord (for AC adapter), instruction manual, fiber Dimensions: approx. 480(W) x 155(H) x 350(D) mm

AP2103B

AZ8115

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