



# AE905/AE905A/AE905B/AE908 Multifunction Test Platform



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# AE905/AE905A/AE905B/AE908 Series Multifunction Test Platform

## Key Features

- A suite of modules for flexible configuration, including stable laser sources, optical power meters, insertion loss & return loss optical power meter, remote-head optical power meters, variable optical attenuators, optical switches, insertion loss & return loss tester and analog optical power meters
- Modular slot-based architecture enables flexible configuration of instrument modules
- High-performance multifunction test platform for replacing benchtop/handheld testers, minimizing capital expenditures

## Applications

- Laboratory optical performance testing
- Optical transceiver & component design and production
- Opto-electronic coupling system validation



## Overview

Brought to you by Deviser Instruments, the AE905/AE905A/AE905B/AE908 series are modular, card-based integrated test platforms engineered for comprehensive optoelectronic measurements. Featuring field-reconfigurable slots, these systems enable flexible configuration of customized test solutions through interchangeable optical measurement modules. With Ethernet-based control, the platforms provide high accuracy, exceptional stability, sub-second response times, and intuitive operation – streamlining R&D design validation and high-volume manufacturing testing for optical transceivers and optical components.

## Platform Architecture

Model	Number of Slots	Key Supported Modules
AE905A	1 main control slot, 3 functional slots	OM3130D series stable laser sources, OM3303/5/7D series optical power meters, OM3311D series insertion loss & return loss optical power meter, OM3310D series remote-head optical power meters, OM51XXD series variable optical attenuators, OM7XXXD series optical switches and OM911XD series insertion loss & return loss tester
AE905B	4 functional slots	(Same as AE905A)
AE908	8 functional slots	(Same as AE905A)
AE905	4 functional slots	OM3302/4/8D series analog power meters (linear voltage output for active alignment)

**Specifications**

AE90X Test Platform				
Model	AE905A	AE905B	AE905	AE908
Number of slots	1 main control slot, 3 functional slots	4 functional slots		8 functional slots
Interfaces	Ethernet, RS232			
Control Methods	Local keypad or remote control			
Power supply	AC 100 - 240 V ( $\pm 10\%$ ), 50Hz $\pm 5\%$			
Dimensions(W×H×D)	224 mm x 147 mm x 410 mm			386 mm x 147 mm x 410 mm
Dimensions of slot(W×H×D)	40 mm x 115 mm x 250 mm			
Weight	<6.5 kg			
Operation temperature	15 °C to 35 °C			
OM3130D Series Stable Laser Sources				
Number of channels in a single slot	1 to 2			
Output wavelengths	1250 to 1650 nm (SM) or 850/1300 nm (MM)			
Source stability	Standard: $\pm 0.5$ nm Customizable: $\pm 0.2$ nm to $\pm 1$ nm			
Output power	LL: < 1mW; L: 1 to 10 mW; N: 10 to 40 mW; M: 40 to 70 mW; H1: 70 to 100 mW; H2: 100 to 200 mW; H3: 200 to 300 mW			
Source bandwidth	Standard: $\leq 2$ MHz Customizable: $\leq 1$ MHz to 5 MHz			
Output power stability	Standard: $\leq 50$ pm (24h) Customizable: $\leq 10.0$ pm to 100 pm (24h)			
Output wavelength stability	Standard: $\leq \pm 0.1$ dB (24h) Customizable: $\leq \pm 0.05$ dB to 0.2 dB (24h) Standard: $\leq \pm 0.005$ dB (15min)			
Polarization extinction ratio	$\geq 20.0$ dB			
Side-mode suppression ratio	Standard: $\geq 35$ dB Customizable: $\geq 35$ to 45 dB			

Relative intensity noise	Standard: $\leq -145$ dB/Hz Customizable: $\leq -145$ to $155$ dB/Hz
Laser type	DFB, FP, VCSEL (850 nm)
Fiber type	SMF, PMF, MMF
Optical output connector	Standard options: FC/PC or FC/APC High-power models (H1/H2/H3): FC/APC only
VOA option	Variable optical attenuator (VOA) option: 0-20 dB adjustable attenuation range

**OM3303/5/7D Series Optical Power Meters**

Model	OM3303D	OM3305D	OM3307D
Number of channels in a single slot	1 to 4	1 to 2	1 to 4
Wavelength range	A: 800 to 1650nm B: 1200 to 1700nm	A: 1290 to 1640nm B: 800 to 1650nm	A: 800 to 1650nm B: 1200 to 1700nm
Power range	-70 to +10dBm	-45 to +25dBm	-55 to +20dBm
Uncertainty	A: $\pm 0.25$ dB (-65 to +10 dBm) $\pm 5\% \pm 5$ pW (-70 to -65 dBm) B: $\pm 0.13$ dB (-65 to +10 dBm) $\pm 5\% \pm 5$ pW (-70 to -65 dBm)	A: $\pm 0.1$ dB (+10 to +25 dBm) $\pm 0.25$ dB (-45 to +10 dBm) B: $\pm 0.05$ dB (+10 to +25 dBm) $\pm 0.13$ dB (-45 to +10 dBm)	A: $\pm 0.25$ dB (-50 to +20 dBm) $\pm 5\% \pm 0.1$ nW (-55 to -50 dBm) B: $\pm 0.13$ dB (-50 to +20 dBm) $\pm 3\% \pm 0.1$ nW (-55 to -50 dBm)
Linearity	$\pm 0.05$ dB	$\pm 0.05$ dB	$\pm 0.05$ dB
Power resolution	0.001 dBm	0.001 dBm	0.001 dBm
Wavelength resolution	0.1 nm to 10 nm	0.1 nm to 1 nm	0.1 nm to 10 nm

**OM3311D Series Insertion Loss & Return Loss Optical Power Meters**

Model	OM3311D
Wavelength range	800 to 1650 nm
Fiber type	SMF or MMF OM3
Return loss range	-75~-30 dB(SMF) -55~-30 dB(MMF)
Insertion loss range	0 to 5 dB
Power range	-55 to 7d Bm
Uncertainty	$\pm 0.25$ dB(-65 to +10 dBm) $\pm 5\% \pm 5$ pW(-70 to -65 dBm)
Linearity	$\pm 0.05$ dB
Power resolution	0.001 dBm
Wavelength resolution	0.1 nm to 10 nm

OM3310D Series Remote-Head Optical Power Meters		
Model	OM3310D	OM3310C
Number of channels	1	1
Optical interface type	SMF, MMF	SMF, MMF
Wavelength range	A: 800~1700nm B: 1200~1700nm	C:850~1650nm
Power range	A:-80~+10dBm B:-70~+20dBm	C:-40~+10dBm
Uncertainty	±0.05dB(-70~+10dBm) ±0.08dB(-60~+20dBm)	±0.13dB
Linearity	A:±0.04dB B:±0.05dB	C:±0.1dB
Power resolution	0.001dB	0.01dB
Wavelength resolution	0.1~10nm	1nm

OM51XXD Series Optical Attenuators					
Model	OM5160D	OM5162D	OM5168D	OM5170D	OM5165D
Number of channels	1	2	8	16	1
Wavelength range	1250 to 1650 nm				800 to 1350 nm
Fiber type	9/125 (SMF)				50/125 or 62.5/125 (MMF)
Attenuation range	0 to 55 dB				0 to 40 dB
Insertion Loss	≤1.5 dB				≤2.0 dB
Attenuation linearity	±0.08 dB (0 to 45dB)				±0.20 dB @ 850 nm
Attenuation repeatability	±0.08 dB (0 to 45dB)				±0.10dB @850 nm
Optical connector	FC/PC, FC/APC, LC/APC				
Maximum optical input power	20 dBm				
Transition speed	≥10 dB/s				
Attenuation resolution	≤0.001 dB				
Beam block	Support				

OM7XXXD Series Optical Switches		
Model	OM71XX	OM7208
Number of I/O ports	1	2
Number of channels	2, 4, 8, 16, 24, 96, customizable	8

Operating wavelength	1260~1650nm (SMF)/ 850/1300nm (MMF)
Insertion loss	≤1.5dB (SMF)/ ≤2.0dB (MMF)
Repeatability	±0.02dB (SMF)/ ±0.03dB (MMF)
Maximum input power	≤500mW
Switching time	≤20ms
Cycle life	≤10°cycles

**OM911XD Series Insertion Loss & Return Loss Tester**

Model	OM9110D	OM9115D
Wavelength range	1310/1550/1625 nm	850/1300 nm
Fiber type	9/125 (SMF)	50/125 or 62.5/125 (MMF)
Return loss range	-75 to -30 dB	-55 to -30 dB
Return loss accuracy	±1.5dB(-30~-65dB)	±2.0dB(-30~-50dB)
Insertion loss range	0~5dB	
Insertion loss test accuracy	±0.05dB(0~1dB)	
Optical interface type	FC/PC or FC/APC	

**OM3302/4/8D Series Analog Optical Power Meters  
(compatible exclusively with the AE905 platform)**

Model	OM3302D	OM3304D	OM3308D
Number of channels	2	4	8
Analog output channels	2	4	8
Wavelength range	800 to 1700 nm		
Power range	-70 to +10 dBm		
Uncertainty	≤ 5%		
Linearity	±0.04dB (-40~+8dBm)		
Power resolution	0.01 dBm		
Wavelength resolution	1 nm		

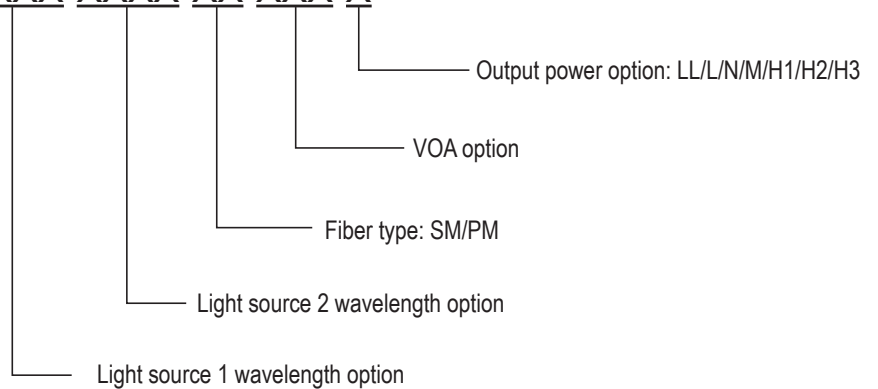
All specifications require more than 1 hour of equipment preheating before measurement. The specifications are suitable for wavelengths outside the water absorption wavelength range.

- 1) The test environment parameters are: operating temperature 22±2°C, humidity less than 70%.
- 2) Power fluctuation performance is guaranteed under standard SMF fiber and splitter, standard test environment, no vibration, and pre-test calibration conditions.
- 3) The marking indicators test for the multimode optical switch module uses a VCSEL light source.

# Ordering Information

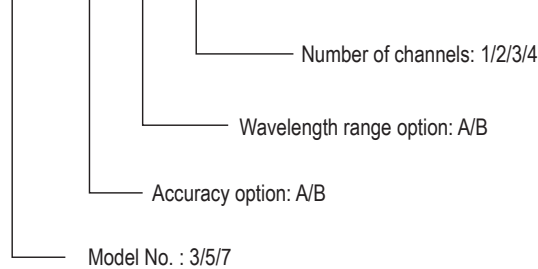
OM3130D-XXXX-XXXX-XX-XXX-X

- Example 1: OM3130D-1310-1490-PM-N  
OM3130D, 1310/1490 nm polarization-maintaining output, excluding VOA option, the output power is 10 to 30 mW
- Example 2: OM3130D-1310-1330-SM-VOA-N  
OM3130D, 1310/1330 nm single-mode output, including VOA option, the maximum output power is 10 to 30 mW, with a power adjustable range of 20 dB



OM330XD - X - X - X

- Example: OM3303D-A-B-2  
OM3303D, uncertainty:  $\pm 0.25$  dB (-65 to +10 dBm),  $5\% \pm 5$  pW (-70 to -65 dBm), wavelength range: 1200-1700 nm, 2 power measurement channels



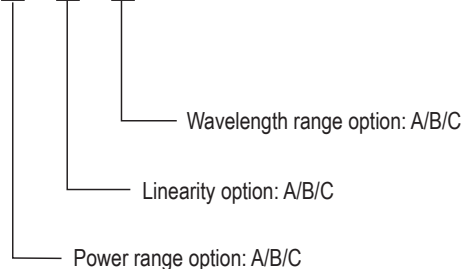
OM3311D - XX

- Example: OM3311D-SM  
OM3311D, single-mode input



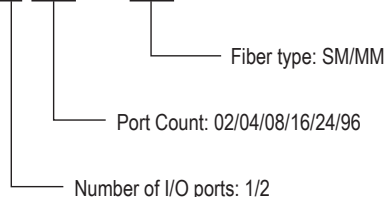
OM3310D - X - X - X

- Example: OM3310D-A-B-A  
OM3310D, power range: -90 to +10 dBm, linearity  $\pm 0.05$  dB, wavelength range: 800-1700 nm



OM7X XXD - XX

- Example: OM7116D-SM  
OM7116D, Number of I/O ports: 1, 1 x 16 optical switch, COM ports: 1, output ports: 16, single-mode input/output





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