



VOAPXle-1002

VOAPXle

Variable Optical Attenuator

PRELIMINARY SPEC SHEET

The built-in power meter and power stabilization function lets you set and maintain the output power stability even when the input power fluctuates. You will get reliable and repeatable test results, each and every time with VOAPXle. The VOAPXle seamlessly integrates with PXle mainframe, allowing for scalability.



coherent
solutions

complexity made simple.

Features



Built in power monitoring capability

Eliminate the need for an extra power meter with the built-in power monitoring capability. Know the actual power coming out of the attenuator all from the same VOA module.



Fast attenuation speed

Fast attenuation speed minimizes the down time during changes in attenuation settings to shorten your overall test time.



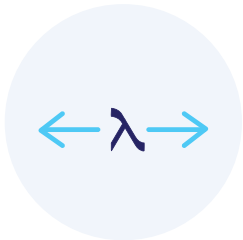
Constant power output mode

With the built-in closed-loop power monitoring, VOAPXle can operate in the constant power output mode to stabilize fluctuating input power.



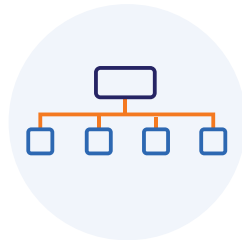
Low insertion loss

Maximise your power budget with the low insertion loss of VOAPXle.



Wide coverage of operational wavelength

One versatile tool to cover a wide variety of applications.



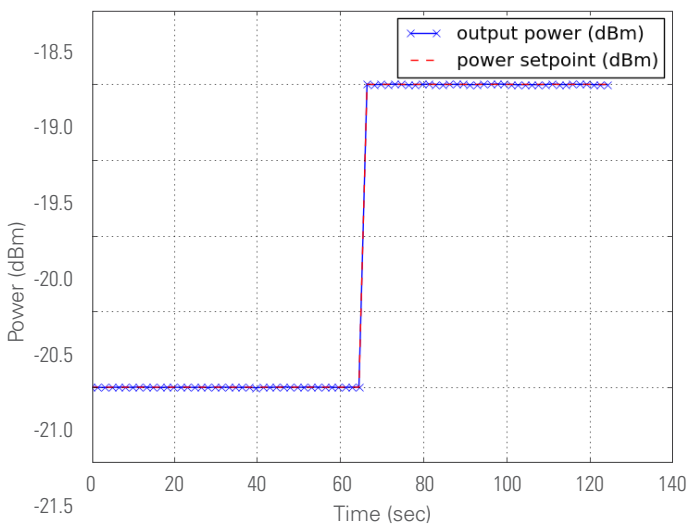
Seamless PXI integration

Take advantage of PXI's integrated triggering and synchronization capabilities across electrical and optical instruments.

Target Applications

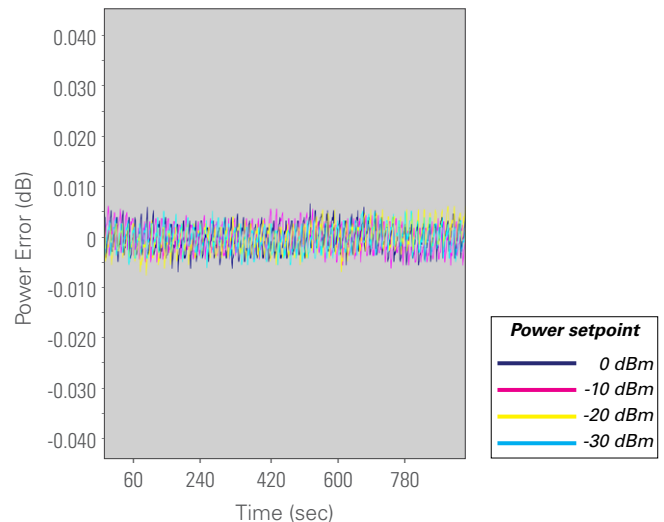
- Transceiver stress testing
- Receiver sensitivity testing
- Loss simulation
- Optical power budget analysis
- Instrument power calibration
- EDFA gain linearity test

VOAPXle Power Control



This graph illustrates how quickly Coherent Solutions' VOA moves to the desired setpoint.

VOAPXle Power Stability - Power Mode



This graph illustrates the power output stability of < 0.005 dB RMS at various power setpoints.



The world-leader in PXI optical test & measurement

Our portfolio of PXI optical test modules is rapidly expanding to meet a wide range of customer requirements and applications.

Over 15 years of experience designing and building advanced coherent optical communications instruments gives us the expertise to quickly and cost-effectively customize our products to meet your requirements. If you don't see what you need, contact us today at sales@coherent-solutions.com.



LaserPXIe **Tunable Laser Source**

Full tunability across C and/or L band.
Narrow 100 kHz linewidth, up to 15 dBm of power.



PowerPXIe **Terminating Power Meter**

Large-area detector power meter available with either large dynamic range or high sensitivity.
Equipped with an external trigger input.



VOAPXIe **Variable Optical Attenuator**

Operates in fixed attenuation or constant output power modes.
Integrated power meter for precise output power control.



PassivePXIe **Passive component integration**

Integrate passive optical components of your choice in a single or dual slot module. WDM couplers, splitters, band-pass filters, PM beamsplitters, circulators and more.



O2EPXIe **Optical-to-Electrical Converter**

High bandwidth, broadband O-to-E converter. AC or DC coupling, various conversion gain and operating wavelength range.



SwitchPXIe **Automated Optical Switch**

Proven reliability and fast switching time.
Various wavelength options including 850 nm, 980 nm, 1310 nm & 1550 nm.



TrayPXIe **Passive Component Organizer**

Protect your passive fiber optic components to keep your workspace tidy & safe.



DopplerPXIe **Photonic Doppler Velocimeter**

Purpose-built module for Photonic Doppler Velocimetry.
A circulator, two VOAs and a passive coupler all built into one compact module.



OSAPXIe **Optical Spectrum Analyzer**

Fast spectral test and measurement in a compact 2-slot module. O, C and L band options.



The perfect PXI chassis to suit your application

From a smaller 4-slot to the 18-slot rack mountable chassis, we can provide the perfect National Instruments PXIe chassis to suit your application.



Technical Specifications

General Specifications	VOAPXle				
Bus connection	PXle				
Slot count	1				
Optical connector type	FC/PC, SC/PC, FC/APC, SC/APC				
Fiber type	SMF-28				
Number of channels	2				
Dimensions (HxWxD)	130 mm x 20mm x 215 mm (5.1" x 0.8" x 8.5")				
Weight	1 kg (~2.2 lbs)				
Operating temperature range	5 °C to 45 °C (41 °F to 113 °F)				
Storage temperature range	-40 °C to 70 °C (-40 °F to 158 °F)				
Model Number	1001	1002	1003	1004	1005
	CWDM8	Broadband	1310 nm	1490 nm	1550 nm
Wavelength range	1260 nm to 1650 nm	1260 nm to 1650 nm	1260 nm to 1360 nm	1440 nm to 1530 nm	1520 nm to 1650 nm
Input power range	-50 to +20 dBm				
Damage level	+23 dBm				
Insertion loss ³	< 1.3 dB at 1310 nm < 2.0 dB for all others	< 2.0 dB	< 1.3 dB at 1310 nm	< 1.8 dB	< 1.3 dB at 1550 nm
WDL	< 0.02 dB/nm				
Return loss ³	> 45 dB				
Warm-up time	< 20 mins				
Attenuator	1001	1002	1003	1004	1005
Calibration wavelengths	1271 nm, 1291 nm, 1311 nm, 1331 nm, 1351 nm, 1371 nm, 1391 nm, 1411 nm, 1490 nm, 1550 nm	1310 nm, 1490 nm, 1550 nm	1310 nm	1490 nm	1550 nm
Attenuation range (typical) ⁵	> 46 dB				
Attenuation range (guaranteed) ⁵	> 40 dB				
Resolution	0.01 dB				
Attenuation speed	0.1 to 1000 dB/s				
Power meter	1001	1002	1003	1004	1005
Calibration wavelengths	1271 nm, 1291 nm, 1311 nm, 1331 nm, 1351 nm, 1371 nm, 1391 nm, 1411 nm, 1490 nm, 1550 nm	1310 nm, 1490 nm, 1550 nm	1310 nm	1490 nm	1550 nm
Polarization dependent responsivity ^{2,3}	< 0.2 dB				
Linearity ^{2,5}	± 0.1 dB		± 0.08 dB		± 0.06 dB
Total uncertainty ^{2,3,5}	± 0.34 dB (typ) ± 0.55 dB (max)				
Averaging time	100 μs to 10 s				
Data logging	1 to 1024 points per channel				



Notes:
1 Specifications are valid at 23 °C ± 3 °C.
2 +10 dBm to -40 dBm, 23 °C.
3 Excluding connectors.
4 < 10 dB attenuation.
5 At calibration wavelengths.

Ordering Information

VOAPXle - XXXX - X - XX

Configuration number	Connector type	Number of attenuators
1001 = SM, CWDM8 (1271, 1291, 1311, 1331, 1351, 1371, 1431, 1451 nm)	FC = FC/PC FA = FC/APC SC = SC/PC SA = SC/APC	2 = 2 attenuators
1002 = SM, broadband (1310, 1490, 1550 nm)		
1003 = SM, 1310 nm		
1004 = SM, 1490 nm		
1005 = SM, 1550 nm		

About Coherent Solutions

Coherent Solutions is the world-leader in PXI optical test and measurement. Our portfolio of PXI optical test modules is rapidly expanding to meet the needs of engineers and scientists around the globe. From enabling pioneering experiments to driving highly-efficient production testing, you'll find us working with customers to solve complex problems with simple and elegant solutions.

To find out more, get in touch with us today.

Coherent Solutions Ltd

General enquiries: sales@coherent-solutions.com

Technical support: support@coherent-solutions.com

Telephone: +64 9 478 4849

North America: +1-800-803-8872

 www.linkedin.com/company/coherent-solutions-ltd

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