



LaserPXle-1002

LaserPXle 1000 Series

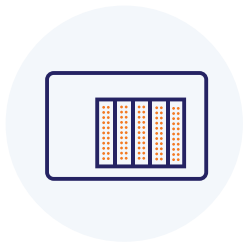
Tunable Laser Source

SPEC SHEET

Coherent Solutions' LaserPXle is a Continuous Wave (CW), tunable laser source offering high-power output, narrow 100 kHz linewidth and 0.01 pm resolution tunability.

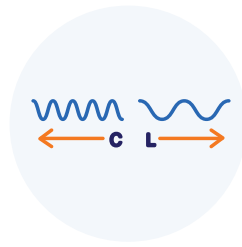


Features



1, 2 or 4 lasers per single-slot module

Achieve high channel density with up to 68 channels in an 18-slot PXI chassis.



Full tunability across C band or L band

Ideal for telecommunications applications; full coverage of DWDM channels.



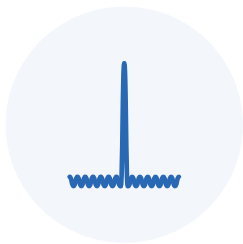
Smarter calibration for enhanced power uniformity

Minimise inter-channel power variance with enhanced power uniformity between channels.



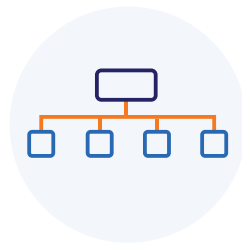
0.01pm tuning resolution

Tune to anywhere within C or L band with a high 0.01pm tuning resolution.



Narrow 100kHz linewidth, up to 16.5 dBm of power

High stability 100kHz linewidth makes it an ideal candidate for some of the most demanding applications, such as coherently modulated high-speed communications.



Seamless PXI integration

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

Target Applications

- Stable local oscillator for coherent receivers
- WDM network loading
- General purpose stable light source for telecom and physics
- Amplifier testing
- Polarization maintaining output ideal for polarization sensitive experiments and testing

cohesionUI graphical user interface makes it simple to control PXle instruments from your PC or mobile device. Its cutting edge design offers a sleek modern interface, cross device compatibility, customizable views and remote network access.

LASERPXIE | SLOT 11 1001-2-FC CSL-184018 HW1.00FW1.10

CHANNEL 1		CHANNEL 2	
STATE	<input type="checkbox"/> Off <input type="checkbox"/> On	STATE	<input type="checkbox"/> Off <input type="checkbox"/> On
FREQUENCY	194 THz ✓ X	FREQUENCY	193.548 THz - +
POWER	-70.12 dBm - +	POWER	-70.01 dBm - +

Navigation sidebar: HOME, MODULES, SETTINGS, Large Format, Info

LaserPXle-1001 2 channel laser control in cohesionUI

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.

Our 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.



LaserPXle **Versatile Laser Source**

Versatile range of laser sources including fully-tunable C and/or L band or fixed wavelength.



PowerPXle **Optical Power Meter**

Large-area detector power meter available in various specifications. Options include external trigger input and analog output.



VOAPXle **Variable Optical Attenuator**

Operates in fixed attenuation or constant output power modes.

Integrated power meter for precise output power control.



OSAPXle **Optical Spectrum Analyzer**

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



O2EPXle **Optical-to-Electrical Converter**

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



SwitchPXle **Automated Optical Switch**

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



PassivePXle **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.



DopplerPXle **Photonic Doppler Velocimeter**

Purpose-built module for Photonic Doppler Velocimetry.

A circulator, two VOAs and a passive coupler all built into one compact module.



TrayPXle **Passive Component Organizer**

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



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	LaserPXle			
Bus connection	PXle			
Optical connector type	FC/PC, FC/APC, SC/PC, SC/APC			
Number of channels	1, 2 or 4			
Slot count	1			
Dimensions (HxWxD)	130 x 20 x 215 mm 5.1 x 0.8 x 8.5 inch			
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
Operating frequency range	191.5 - 196.25 THz		186.0 - 191.1 THz	191.5 - 196.25 THz
Operating wavelength range ⁵	1527.605 - 1568.773 nm		1568.773 - 1611.787 nm	1527.605 - 1568.773 nm
Laser type	Thermally tuned external cavity			
Step frequency tuning resolution (wavelength) ²	100 MHz (1 pm)			
Step tuning time	< 25 s			
Fine frequency tuning resolution ²	1 MHz (0.01pm)			
Linewidth (FWHM), instantaneous ³	< 100 kHz			
Side-mode suppression ratio	40 dB (55 dB typical)			
Frequency linearity (wavelength) ²	± 1.5 GHz (± 13 pm)			
Frequency uncertainty (wavelength) ²	± 2.5 GHz (± 22 pm)			
Frequency stability (wavelength) ²	± 0.3 GHz (± 3 pm) over 24 hours			
Maximum optical output power	≥ 13 dBm	≥ 15 dBm	≥ 13 dBm	16.5 dBm
Minimum optical output power	≤ 8 dBm			
Optical power uncertainty after calibration ⁴	± 0.6 dB			
Power stability	± 0.1 dB over 24 hours			
Output power tuning resolution	0.01 dB			
Power flatness, peak-to-peak	± 0.25 dB over entire wavelength range			
Polarization extinction ratio	> 18 dB at the PM fiber output			
Relative intensity noise RIN (for 13 dBm)	-140 dB/Hz (10 MHz – 40 GHz)			
Power monitoring	Built-in			



Model Number	1005	1007
Operating frequency range	186.0 - 191.1 THz	Ch 1: 191.5 - 196.25 THz Ch 2: 186.0 - 191.1 THz
Operating wavelength range ⁵	1568.773 - 1611.787 nm	Ch 1: 1527.605 - 1568.773 nm Ch 2: 1568.773 - 1611.787 nm
Laser type	Thermally tuned external cavity	
Step frequency tuning resolution (wavelength) ²	100 MHz (1 pm)	
Step tuning time	< 25 s	
Fine frequency tuning resolution ²	1 MHz (0.01 pm)	
Linewidth (FWHM), instantaneous ³	< 100 kHz	
Side-mode suppression ratio	40 dB (55 dB typical)	
Frequency linearity (wavelength) ²	± 1.5 GHz (± 13 pm)	
Frequency uncertainty (wavelength) ²	± 2.5 GHz (± 22 pm)	
Frequency stability (wavelength) ²	± 0.3 GHz (± 3 pm) over 24 hours	
Maximum optical output power	≥ 15.4 dBm	≥ 13 dBm
Minimum optical output power	≤ 8 dBm	
Optical power uncertainty after calibration ⁴	± 0.6 dB	
Power stability	± 0.1 dB over 24 hours	
Output power tuning resolution	0.01 dB	
Power flatness, peak-to-peak	± 0.25 dB over entire wavelength range	
Polarization extinction ratio	> 18 dB at the PM fiber output	
Relative intensity noise RIN (for 13 dBm)	-140 dB/Hz (10 MHz – 40 GHz)	
Power monitoring	Built-in	

SPECS AS OF JUNE 2019

Notes

1 Specifications are valid at 23 °C ± 3 °C.

2 Varies slightly according to wavelength.

3 The laser uses a small FM dithering as part of its wavelength-locking mechanism. The instantaneous linewidth is measured in 1 ms (integration time).

4 At maximum output power.

5 Wavelength is an approximation. Laser is controlled in frequency.



Ordering Information

LaserPXIe -XXXX - X - XX

Model number

1001 = 1527 to 1568 nm, 8 - 13 dBm
1002 = 1527 - 1568 nm, 8 - 15 dBm
1003 = 1568 - 1611 nm, 8 - 13.5 dBm
1004 = 1527 - 1568 nm, 8 - 16.5 dBm
1005 = 1568 - 1611 nm, 8 - 15.4 dBm
1007 = Ch 1: 1527 - 1568 nm, Ch 2: 1568
- 1611 nm, 8 - 13.5 dBm

Connector type

FC = FC/PC
FA = FC/APC
SC = SC/PC
SA = SC/APC

Number of channels

1 = 1 Channel
2 = 2 Channels
4 = 4 Channels

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 intuitive 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.coherent-solutions.com

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

 www.facebook.com/CoherentSolutionsLtd

 www.youtube.com/CoherentSolutionsLtd