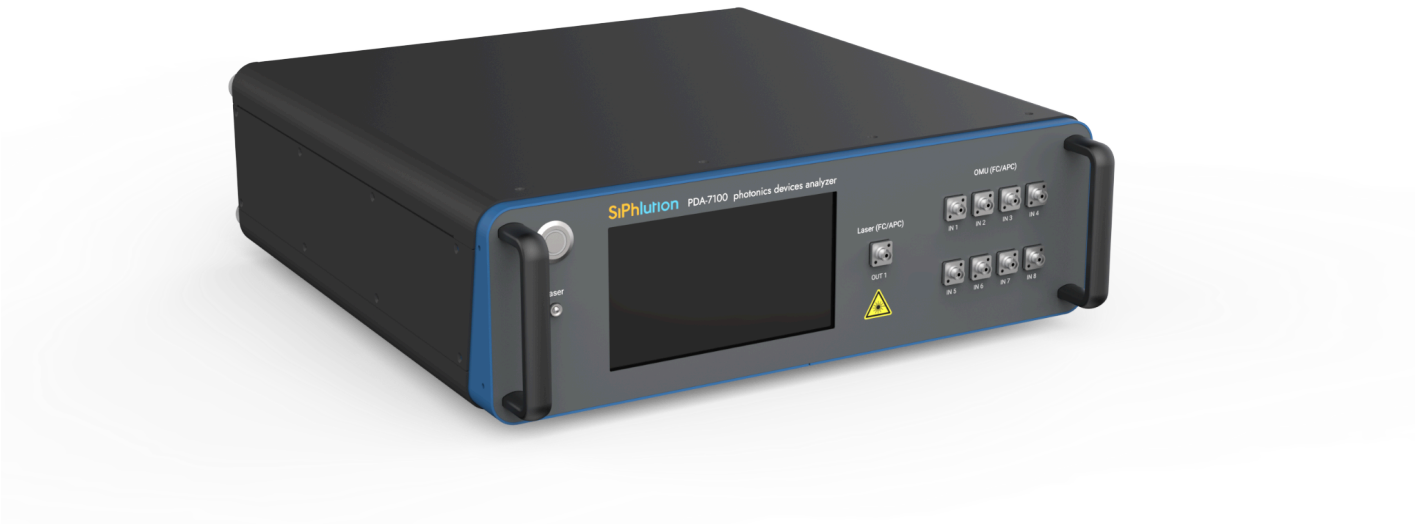
SiPhlution
Silicon Photonics Testing Solution

PDA-7100

Photonic Device Analyzer

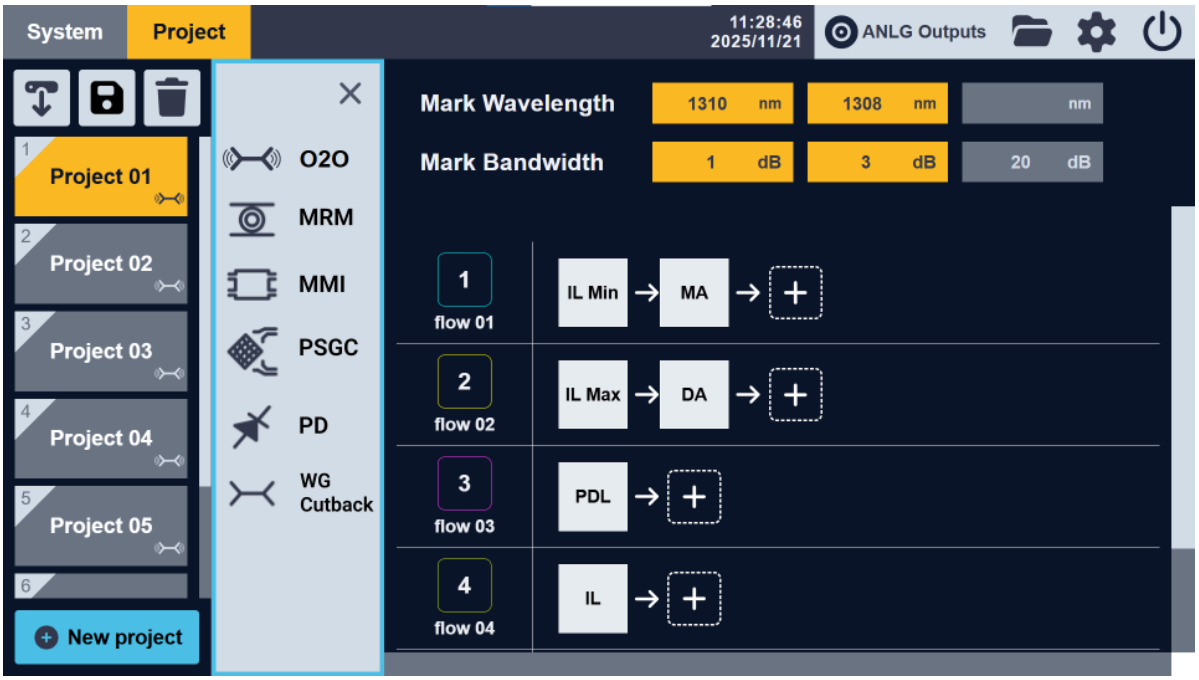
Industry-First Dedicated Turn-Key Test System for Silicon Photonics

The PDA-7100 is a next-generation integrated test platform engineered for high-throughput Photonic Device Analysis (PDA). Its architecture is optimized to deliver both the precision required for advanced R&D and the speed demanded by high-volume production environments.



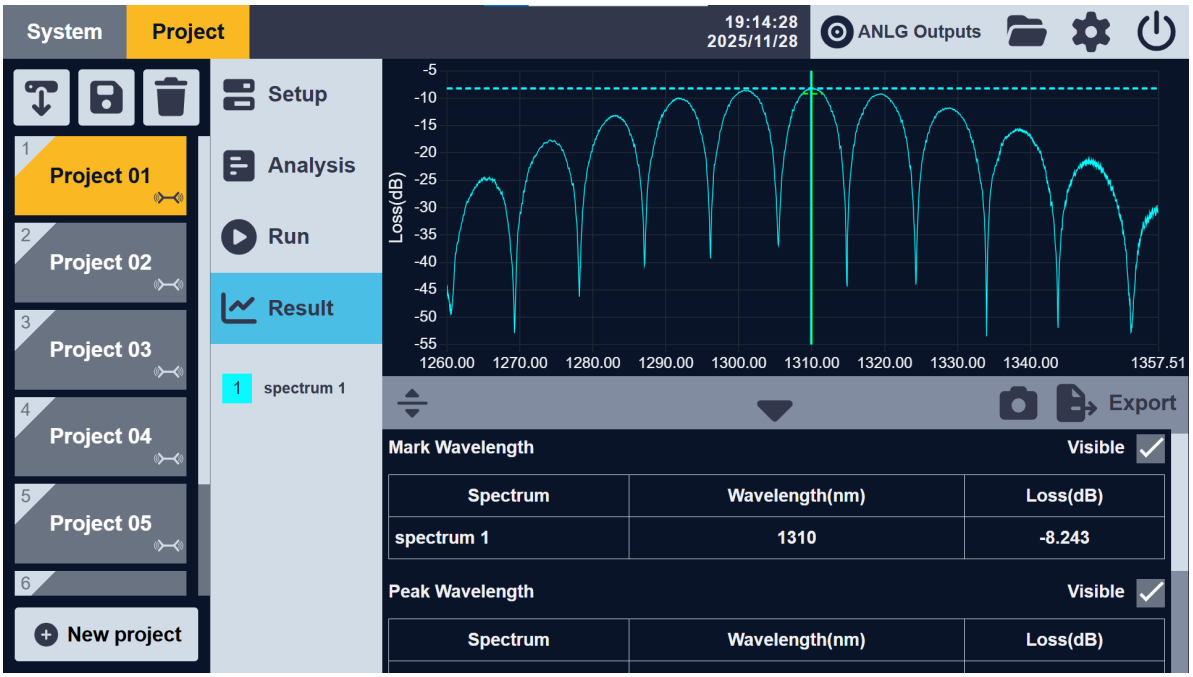
Project-Based Configuration

The PDA-7100 utilizes a task-oriented, project-based architecture that simplifies complex setup procedures. Users instantly configure the entire instrument suite by simply selecting their target device type(e.g., O2O, MRM, MMI, 1DGC, 2DGC).



Unmatched Measurement Throughput

The platform delivers ultra-fast characterization capability, achieving end-to-end measurement and data analysis in **“2”** seconds from execution start, dramatically accelerating production cycle times.



Optimized for Automated Environments - ABRaEngine™

Built on ABRaEngine™ software, a powerful control platform, the PDA-7100 offers a robust Web-based UI and remote control SCPI that enable seamless integration with automated production equipment, including probe stations and optical coupling systems. Its project-based workflow enables quick setup and consistent measurement execution, helping engineers ramp up faster in silicon photonics testing

Specifications – Laser Characteristics				
Wavelength	Operating wavelength range		nm	1260 ~ 1360
	Wavelength Accuracy [a, b]		pm	≤ ±10
	Wavelength Repeatability [a, c]		pm	≤ ±5
	Wavelength Stability [a, d]		pm	≤ ±5
	Wavelength Tuning Resolution		nm	≤ 0.01
Sweep control	Maximum Sweep Speed		nm/s	400
Optical power	Minimum Output Power (Typical)	1260~1360 nm	dBm	≥ 10
		1280~1360 nm	dBm	≥ 13
		1310 nm	dBm	≥ 14

	Output Power Adjustable Range	dB	20
	Power Stability [a, d]	dB	±0.02
	Power Repeatability [c, e]	dB	±0.05
Spectral characteristics	Linewidth [f]	kHz	< 100
	Signal to Source ASE Ratio [g]	dB	≥ 60

a. After warm-up time, measurement over 10 hours at temperature 25±1℃, and for the output power ≥ -5 dBm.
b. With wavelength locking.
c. Over 100 times.
d. Over 1 hour.
e. For output power ≥ 0 dBm with Sweep speed 120 nm/s.
f. With modulation off.
g. ASE is measured at 0.1 nm bandwidth and 1 nm away from center wavelength.

Specifications – OMU Characteristics

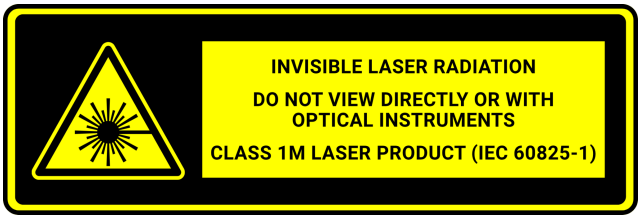
Operating Wavelength Range	nm	1250 ~ 1650
Measurement Channel	pcs	8
Wavelength Accuracy	pm	±8
Wavelength Repeatability [a, b, c]	pm	4
Power Uncertainty [b, c]	dB	0.05
Power Resolution [b, c]	dB	0.005
Power Repeatability [a, b, c]	dB	<±0.03
Dynamic range(Typical)	dB	> 70

a. Measurement over 10 hours at temperature 25±1℃.
b. Laser power > -10 dBm at temperature 25±1℃.
c. Measured at sweep speed 120 nm/s.

Specifications – Hardware

Interfaces	Optical Connectors	FC/APC
	Display ports	1x HDMI 1x Display Port
	USB Type-C ports	1 x USB3.2 Gen2 support DisplayPort 1.4a Alt. Mode, up to 3840x2160@60Hz
	USB Type-A ports	2 x USB3.2 Gen1x1 5Gbps (Front) 4 x USB3.2 Gen2x1 10Gbps (Rear)
	Monitor	7 in capacitive touchscreen
	Electrical BNC ports	7x BNC including 4 analog output ports Voltage from Analog Output Signal: 0-5V
	Remote	2x Ethernet RJ45 LAN 10/100/1000 Mbit/s

Data storage	Hard drive	SSD, 256G
General	Operating Temperature Range	15 ~ 35 ℃
	Size (L x H x D)	430mm x 420mm x 133mm
	Weight	13kg
	Rackmount	3U full rack
	Laser safety	Class 1M
	Power supply	100 - 240 V AC; 50/60 Hz



Ordering Information

Model: PDA-7100-A-B

Code	Option	Description
A	Wavelength	O = 1260-1360nm (Please contact SiPhlution if you need others.)
B	Polarization controller	N = None M = Computed Polarization Response (Six-State Müller Matrix). (Please contact SiPhlution if you need others.)

Example: **PDA-7100-O-M**

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