

Preliminary

Handheld Polarization Synthesizer (HPOS)

Features / Benefits

- Handheld and Lightweight
- Tracking and locking any state of polarization (SOP)
- Insensitive to small fluctuation of the input SOP
- Wide operating wavelength range
- Low insertion loss
- Real time display of the Poincaré sphere
- Cost effective and time saving
- Built-in standard USB 2.0 interface
- Rugged housing, sleek, and stylish design
- Brilliant 3.5" color TFT display
- Bluetooth™ ready
- One expansion slot for CF type II card
- One expansion slot for SD / MMC card
- Built-in data storage management
- Touch screen and user friendly GUI

Applications

- Manufacturing
- Maintenance / repairing
- R&D / laboratory

RoHS
Compliant



The j²waves Handheld Polarization Synthesizer (HPOS) is a handheld instrument that is able to generate and sustain any desired states of polarization (SOP), regardless of the input SOP. This instrument can be used as a SOP generator, polarization controller, or polarization tracker. Based on Lightwaves2020's innovative and proprietary technologies in liquid crystal cells and polarization, the SOP generated, controlled, or tracked by the polarization synthesizer is very stable, consistent and reliable; independent of the input SOP; and is insensitive to the input fluctuation.

The j²waves HPOS is designed to have many features, such as log / linear display modes, auto ranging, user calibration, and reference measurements. The measured SOP and the Poincaré Sphere are simultaneously displayed on a 3.5" TFT color screen. With touch screen and friendly GUI, it is an easy-to-use handheld tool enabling you to perform various polarization tasks: measurement, control, generation, tracking and management.



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Specifications

Optical

Parameters	Unit	Specification
Wavelength Range	nm	1550 to 1600*
Input Power Range	dBm	-15 to 10
Insertion Loss	dB	< 1.5
Return Loss	dB	> 50
PMD	ps	< 0.1
SOP Tracking Accuracy	°	< 2
SOp Settling Time	second	< 1.0
SOP Resolution	-	± 0.02
Input SOP Accuracy	%	2±

*: Other ranges available

Environmental & Physical

Item	Unit	Specification
Operating Temperature	°C	0 to 40
Storage Temperature	°C	-20 to 70
Relative Humidity (Non-Condensing)	%	10 to 90
Size (H x W x D)	mm	88 x 192 x 35
Weight With Jacket	lb	1.2
Power Supply	VDC	9, batteries or adaptor
Battery Life	hrs	8