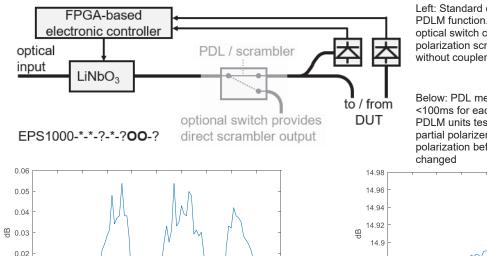
Novoptel

PDLM Polarization Dependent Loss Multimeter

- Usage mode or extension of EPS1000 polarization scrambler, with built-in photodetector(s).
- Polarization-dependent loss (PDL) and mean loss are calculated in firmware.
- PDL measurement interval <100 ms
- PDL measurement range 0.05...50 dB
- Optical power meter function
- Extinction method (superb especially for large PDL) and sqrt(3) method
- Polarization scrambler functionality is kept with optional switch.
- Fully programmable (USB, LAN, GUI, Matlab, Python, C, ...)



Left: Standard configuration of EPS1000 with PDLM function. DUT = device under test. An optical switch can be built in, which makes the polarization scrambler EPS1000 accessible without coupler insertion loss.

Below: PDL measurements (extinction mode, <100ms for each of 100 measurements, 2 PDLM units tested) of patchcord (left) and partial polarizer (right) as DUT while polarization before and behind DUT is changed



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0.0

 Measurement of all 4 Stokes parameters, display on Poincaré sphere and in oscilloscope mode. Also available: Normalized Stokes vector, degree-of-polarization (DOP)

100

- Three choices for the normalization of Stokes parameters/vectors:
 - Standard: Normalized Stokes vectors are normalized to unit length. Regardless of power and DOP, they appear at the surface of the Poincaré sphere.

14.88

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- Exact: Normalized Stokes vectors are normalized only with respect to optical power. For DOP < 1 (or DOP = 0) they appear inside (or in the center of) the Poincaré sphere.
- Non-normalized: Display of the non-normalized Stokes parameters. This means, DOP and optical power determine the length of the displayed S₁-S₂-S₃ Stokes vector.
- 100 MHz polarization state sampling frequency. 64 M polarization states can be recorded.
- 30 MHz analog bandwidth. Averaging (10 ns, 20 ns, 40 ns, ... 2.68 s), triggering, gating
- Internal triggering on SOP or intensity events. Selectable pre-trigger data ratio. Perfectly suited for automated long-term assessment of polarization transients. Download while recording next events!
- Realtime Poincaré sphere display up to 100 MHz in graphical user interface (GUI) or 50 MHz on connected monitor (HDMI; 720p60). Not a single sample is lost!
- 100 MHz memory view, zoom in oscilloscope mode, screenshots, numeric display
- Speed histogram, intensity histogram, software examples for Matlab™ and Labview™
- Hardware option: 2 sensitivity ranges extend usability to +4...-40 dBm.
- With EPS1000 or EPX1000: Mueller & Jones matrix (≥ 5.12 us), PDL (<0.005...>60 dB), PMD measurement. Optional lock-in detection. EPS1000 card can be plugged onto PM1000 card.
- Power consumption: ~5 W (+5 V from included power supply 100-240 V)
- Available as a standalone desktop unit, as a module card, and as an intellectual property (IP) core
- Realtime operation with Serial Peripheral Interface (SPI), trigger/gating input/output (BNC)
- Operation via control buttons of desktop unit, USB, LAN, SPI or graphical user interface (GUI)
- NEW Optional O-E-S-C-L-U band operation ≤182...241 THz / 1241...≥1647 nm
- Tunable C&L band laser modules can be built in.
- Can define SOP tracking by EPS1000, also during optical frequency sweep and according to table

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