# Field Portable Dispersion & PMD measurement system





- HIGH SPEED Chromatic Dispersion by Phase Shift & Differential Phase Shift
- HIGH SPEED PMD by Interferometer
- Fully IEC, TIA and ITU compliant
- Full shift battery life
- up to 60dB dynamic range.
- Dispersion in as little as 10 seconds
- PMD in as little as 4 seconds
- Windows 10<sup>™</sup> with Touch Screen
- PECON is built on the Microsoft<sup>®</sup> .NET Framework
- Built-in Report Designer
- Soon to be available OTDR modules

**PE.fiberoptics** range of field portable measurement instruments led the field when it introduced the FD4 Field Portable Dispersion measurement system in 1988. This year, we are proud to introduce our 4th generation Field Portable system which we are calling the FP5000.

New from-the-ground-up, the FP5000 uses utilises the latest DSP and detection technology, reducing measurement noise and greatly improving measurement speed.

Considerable investment has been made in software and the latest version of **PE.fiberoptics**' controller package 'PECON' which is been built on the Microsoft<sup>®</sup> .Net Framework and now runs on Winfows  $10^{\text{TM}}$ . The result is a software package that maintains our philosophy of simplicity, stability and user friendliness, whilst adding powerful features such as an all-new Report Designer.



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# Specifications

Measurement according to applicable TIA/IEC/ITU recommendations.

## Chromatic Dispersion and PMD

Spectral Characteristics <sup>1</sup>	1310 LED	1550 LED	15/16 LED	Other LEDs available
Chromatic Dispersion (CD)	1250 - 1340	1520 - 1580	1490 to 1630	
Polarisation Mode Dispersion (PMD)	1200 to 1650		LED dependent	
Wavelength increment (nm) (minimum)	0.001		User definable	

## Dynamic Range<sup>2</sup>

CD	45dB	LED dependent
PMD	60dB	LED dependent

### Measurement Range

CD	+/- 6,000ps/nm	
PMD	0.06ps to 130ps	LED dependent

Measurement speeds<sup>3</sup>

CD	10 seconds	Typical multipoint scan
PMD	4 seconds	Typical scan

Measurement performance4	Repeatability	Uncertainty⁵	
Chromatic Dispersion (ps/nm.km)	<0.005	<0.05 or 1.5% +/-0.02	Based on 20 measurements of 25km spool G652 fiber.
Lambda Zero (nm)	<0.1	<0.5	
Slope at Lambda zero (ps/nm.km^2)	<0.35%	<1.5%	
PMD	0.05ps	<0.02 +/- 2% PMD	Based on 20 measurements of PMD546 0.3ps calibration artefact.

All specifications are typical and subject to improvement or modification without notice or obligation	1	The wavelength ranges mentioned are nominal and will vary according to the Light source configuration. Measurement outside these ranges is available however the performance specifications may vary.
Please refer to any formal offers for confirmation of specification	2	Dynamic range varies according to the Light source configuration.
	3	Measurement speeds mentioned are for a nominal measurement configuration and will vary according to the particular

Measurement speeds mentioned are for a nominal measurement configuration and will vary according to the particula. setup.

Specifications vary dependant on the Light source configuration, fiber length and type.

Accuracies limited by/related to NPL/NIST uncertainties given for calibration artefact used.

FP5000 series product data sheet issue 1.0.4

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(This product complies with 21 CFR 1040.10 Class 1 LED product )



PE.fiberoptics is certified ISO 9001 and attests to the quality of these products

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4

5

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