

Photon Kinetics Production and Laboratory Products

**Reducing the cost of optical
fiber and cable measurements**

www.pkinetics.com



Reducing the Cost of Measurements

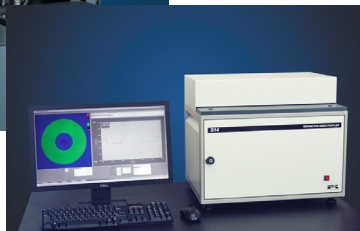
For over 35 years, Photon Kinetics has provided the world's leading optical fiber, cable and component manufacturers with automated test systems for virtually every stage of optical fiber production - from preform to finished cable. We also offer fiber preparation and alignment tools that enhance the productivity of our test systems, and software that facilitates both instrument remote control and data collection. Together, our comprehensive measurement solutions enable fiber, cable and component manufacturers to obtain high quality measurements in the shortest possible time, facilitating both product improvement and manufacturing cost reduction.



Photon Kinetics headquarters in Beaverton, Oregon, USA



2600 Preform Analyzer



S14 Fiber Refractive Index Profiler

Refractive Index Profiling

The first measurement performed in optical fiber manufacturing is characterization of the fiber preform by refractive index profiling. Profile data is essential for estimating the transmission characteristics of the fiber that is ultimately drawn from the preform, and it is useful for obtaining information that is critical for subsequent preform processing. Refractive index profiling is also performed on drawn fibers to ensure that the drawing process did not significantly alter the profile. The capability and performance of our refractive index profiling products are the reason that over 95% of the world's optical fiber manufacturers rely on them to maximize both preform and fiber yields.

Fiber Index Profiling

S14 Fiber Refractive Index Profiler

Preform Index Profiling

2600 Preform Analyzer

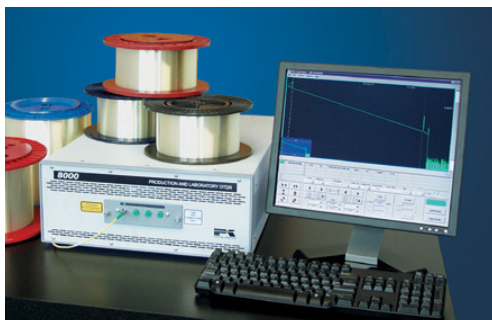
2610 High Performance Preform Analyzer

P104 Preform Analyzer

P106 Preform Analyzer

Fiber Transmission Parameters

Our line of products for characterizing optical fiber transmission properties consists of a broad range of test instruments from OTDRs to multi-parameter test systems. These products are used by optical fiber, cable and component manufacturers to measure fiber transmission properties that are critical to the proper functioning of both single-mode and multimode optical communications networks. These include: spectral attenuation, chromatic and polarization mode dispersion, cut-off wavelength, mode field diameter, numerical aperture, effective area, multimode bandwidth, differential mode delay and encircled flux. All of Photon Kinetics test systems for fiber transmission parameters feature high-speed fiber handling and data acquisition, which provide manufacturers with rapid, reliable process feedback, high output and reduced measurement costs.



8000 Production and Laboratory OTDR

Chromatic Dispersion, PMD and Strain

2800 Fiber Analysis System

2850 Tunable Laser CD System

Optical Time Domain Reflectometers

8000 and 8000i Production and Laboratory OTDRs

Spectral Attenuation and Cut-off Wavelength

2300 Fiber Analysis Systems (2300A, AG)

2500 Optical Fiber Analysis Systems (2500A, AB, AD, ABD)

Bandwidth and DMD

2500 Optical Fiber Analysis Systems (2500B, D, AB, AD, ABD)

Encircled Flux

2440 Launch Analyzer

Numerical Aperture

2201 Far Field Scanner

2500 Optical Fiber Analysis Systems (2500A, AB, AD, ABD)

Mode Field and Effective Area

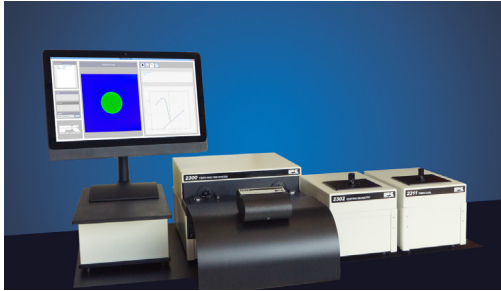
2201 Far Field Scanner

2304 Mode Field Diameter Option (2300A, AG)

2XXX-MFD Mode Field Diameter Option (2500A, AB, AD, ABD)

Fiber Geometry

In order for optical fibers to be spliced with low loss and perform as designed once installed, their geometry must be precisely characterized and controlled. The 2300G and 2300AG Fiber Analysis Systems provide fiber manufacturers with high performance measurement capability for critical fiber geometry parameters such as core and cladding diameter, circularity and concentricity of the core and cladding, as well as the coating geometry (2302 Option) and the fiber's curl radius (2311 Option). Other options available for the 2300 systems can provide even higher performance measurement of conventional fiber properties or extend the system's capability to include the characterization of various specialty fiber designs including polarization maintaining fibers and micro-structured (holey) fibers having embedded structures. Further the 2300L configuration employs specialized optics to enable measurement of large diameter fibers with cladding diameters from 125 to 450 μm .



2300G Fiber Analysis System with 2302 Coating and 2311 Curl Options

Glass Geometry

- 2300G Fiber Analysis System
- 2300AG Fiber Analysis System
- 2300-RGS High Precision Fiber Geometry Option
- 2300-PMF Polarization Maintaining Fiber Geometry Option
- 2300-MSF Micro-structured Fiber Geometry Option
- 2300L Large Diameter Fiber Geometry System

Coating Geometry

- 2302 Coating Geometry System
- 2302 Coating Geometry Option (2300G, AG)

Fiber Curl

- 2311 Fiber Curl System
- 2311 Fiber Curl Option (2300G, AG)

Fiber Preparation, Alignment and Test Automation

Photon Kinetics is the leading supplier of high productivity test solutions for the fiber and cable manufacturing industry. But the performance of our instruments is just part of the reason. Our fiber preparation and handling products minimize the time test technicians spend preparing fibers and connecting them to the test instrument (e.g. 8000 OTDR or 2800 Fiber Analysis System) thereby leveraging the performance of the test system to maximize overall station productivity.

PK's fiber preparation products include the industry standard FK11 and FK12 fiber cleavers. The FK12 creates flat, angled fiber end faces for low reflectance termination of optical components, while the FK11 cleaver produces flat fiber end faces on standard or large diameter (FK11-LDF) fibers. Once cleaved with the FK11, fibers can be manually coupled to the test instrument in seconds with either the 1100 or 1120 Single Fiber Aligners. For high volume cable testing, the 1001-MFH Multiple Fiber Handler provides automated fiber coupling of loose tube or ribbon fibers.

In addition to the fiber cleavers and fiber coupling tools that minimize test setup time, Photon Kinetics also offers test automation software for several of our instruments. The OASYS.net software for the 8000 or 8000i OTDRs automates production cable testing. When used with the 1001-MFH Multiple Fiber Handler, it's possible to test over 1000 fibers in an 8 hour shift. For fiber or cable design qualification, the EnvirOTDR software option for the 8000 OTDR not only controls the OTDR, but it can also control optical switches and environmental test fixtures, all while delivering unprecedented loss measurement precision using a patented loss measurement technique.



1001-MFH Multiple Fiber Handler



FK11 and FK12 Cleavers

Fiber Cleaving

- FK11 Fiber Cleaver
- FK11-LDF Large Diameter Fiber Cleaver
- FK12 Angled Fiber Cleaver

Single and Multiple Fiber Alignment

- 1001-MFH Multiple Fiber Handler
- 1100 Single Fiber Aligner
- 1120 Bare Fiber Aligner

Test Automation Software

- EnvirOTDR Qualification System
- OASYS.net OTDR Automation Software

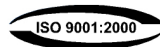


	1001-MFH	1100	1120	2201	2300A	2300G	2300AG	2302	2311	2440	2500A	2500B	2500D	2500AB	2500AD	2500BD	2500ABD	2600/2610	2800	2850	8000	8000i	EnviroTDR	FK11	FK12	OASYS.net	P104/P106	S14	
Geometry Measurements																													
Standard Fibers - Core, Clad																													
Standard Fibers - Coating																													
Standard Fibers - Colored Coating																													
PM Fibers - Core, Clad, Stress Rods																													
Holey Fibers - Core, Clad, Rings, Holes																													
Large Diameter Fibers - Core, Clad																													
Large Diameter Fibers - Coating																													
Fiber Curl																													
Transmission Measurements																													
Attenuation - Spectral																													
Attenuation - Spot and Non-uniformity																													
Change in Optical Loss																													
Chromatic Dispersion, Lambda Zero, Slope																													
Coupling Ratio, Insertion Loss, Excess Loss																													
Cut-off Wavelength																													
Differential Mode Delay																													
Effective Area																													
Encircled Flux and Mode Power Distribution																													
Event Loss and Reflectance																													
Far Field (Numerical Aperture)																													
Fiber Length																													
Fiber Strain																													
Mode Field Diameter																													
Modal Bandwidth (Multimode Fiber)																													
Near Field (Core Diameter)																													
Polarization Mode Dispersion																													
Skew																													
Refractive Index Profiling																													
Standard Fiber Preform Index Profile																													
PM Fiber Preform Index Profile																													
Preform Tomography																													
Fiber Index Profile																													
Fiber Preparation, Alignment and Test Automation																													
Enviro-mechanical Test Automation																													
Flat Fiber Cleaving																													
Angled Fiber Cleaving																													
Single Fiber Alignment																													
High Stability Single Fiber Alignment																													
Multiple Fiber Alignment																													
OTDR Test Automation																													

 Standard Measurement
  Measurement Option
  Parameter Prediction

Photon Kinetics includes products formerly branded as York Technology, PK Technology, GN Nettest and NetTest.

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