Arden PHOTONICS

OPTICAL FIBER MEASUREMENT SPECIALISTS

NEW OPTICAL FIBER MEASUREMENT SOLUTIONS FOR SPECIALTY FIBERS

Exclusively for EPIC members

We help optical fiber manufacturers to make better optical fibers for a better tomorrow.

5 September 2023

About Arden Photonics

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- Arden Photonics was founded in 2001 and is headquartered in Solihull, in the heart of England.
- Named after the historic Forest of Arden, a region which bears the name of Mary Arden, mother of William Shakespeare, who was born nearby.

- We help optical fiber manufacturers to make better optical fibers for a better tomorrow.

Mary Arden's House in Stratford-upon-Avon

Arden Photonics Headquarters in Solihull

Our Areas of Expertise

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With our years of experience and expertise in optical fiber measurement, we develop and manufacture solutions to measure a variety of fibers' properties:

Multimode Launch Measurement

Multimode Launch Condition Control

Modal Content Analysis

Refractive Index Profiling

Interferometric end face inspection

Fiber Geometry measurement

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nPA-600 Refractive Index Profiler

- The quick and easy way to get the Refractive Index data to verify your specialty fiber design and manufacturing processes.
- Measure most fibers up to 600 µm in diameter, including PM, octagonal, multi-core fibers
- Uses a modified refracted near-field technique to analyse a fiber end-face to determine the full 2D refractive index distribution.
- Prepare and measure a fiber sample in under 2 minutes (2D measurement in seconds)

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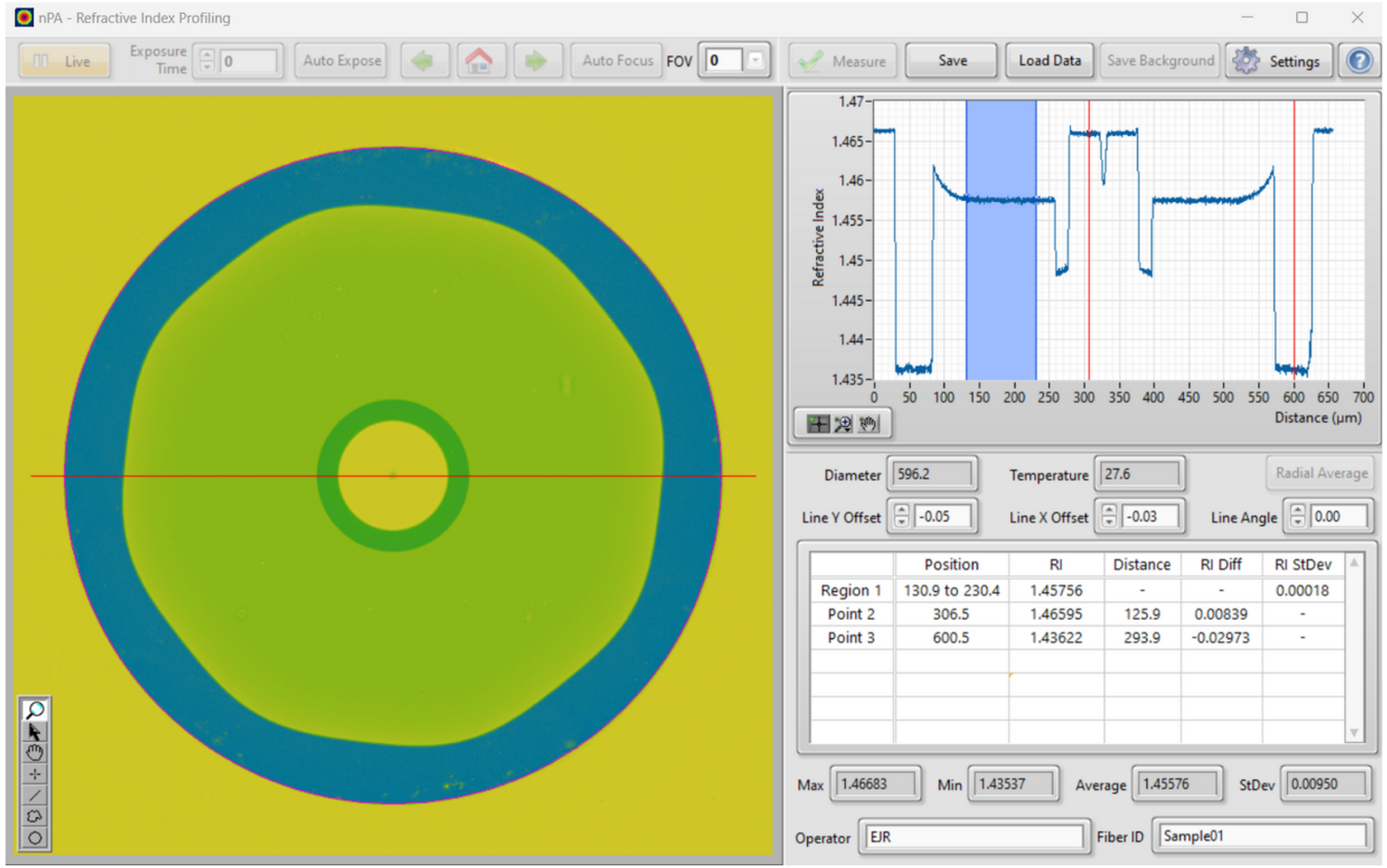
nPA v2.1 software



- Production-ready nPA v2.1 software boosts system performance and improves user experience. Key features:
  - Region cursor markers
  - API
  - Various measurement and output options
- Traceable calibration and new calibration tools

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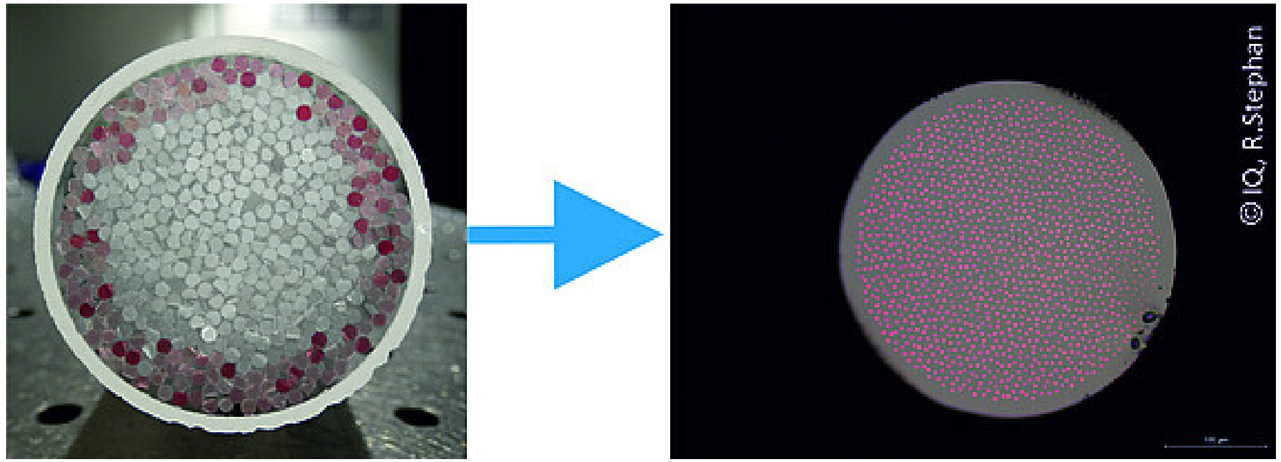
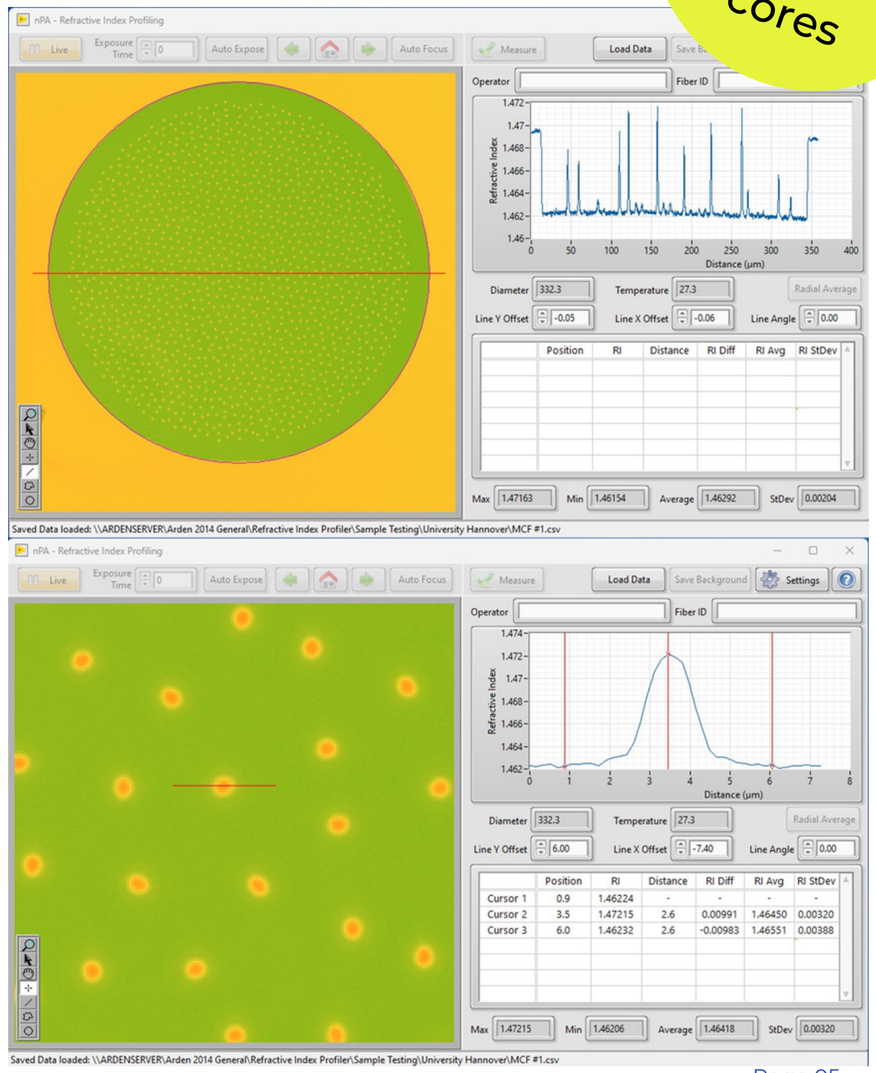
nPA-600's high resolution

Measure each of these 1,281 cores

Leibniz Universität Hannover



Arden's support to the University of Hannover



- **The fiber:** A fiber with a novel multicore structure, with 1,281 cores, each core being around 1.3 µm in diameter.

- **Arden's solution:** Refractive Index Profiler nPA-600 reliably and accurately measure the refractive index profile of the fiber and each of its core!

CMC-1550 Modal Content Analyser

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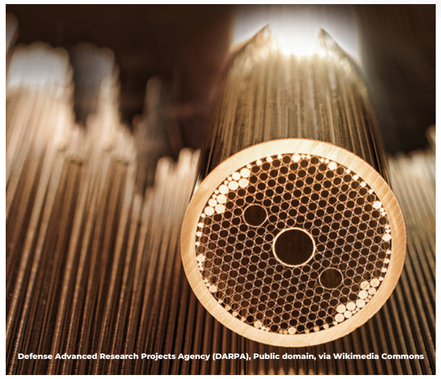

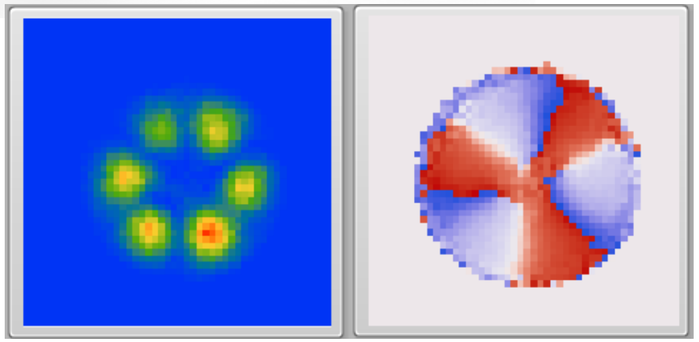

Mode Intensity / Mode Phase

- **Hollow core and few-mode fibers**
  - Intricate structures
  - Sensitive to the slightest design or production issues, impacting their overall performance.

- The only commercially available Modal Content Analyser measuring these fibers, using the spatially and spectrally resolved imaging (S2) technique.

- **Key benefits:**
  - Obtains mode phases and mode intensity information for each mode
  - Provides comprehensive understanding of the individual mode characteristics and their interactions within the fiber
  - Helps to reconstruct the propagation mode profiles and phases of the guided modes of the fiber.

CMC-1550 Modal Content Analyser

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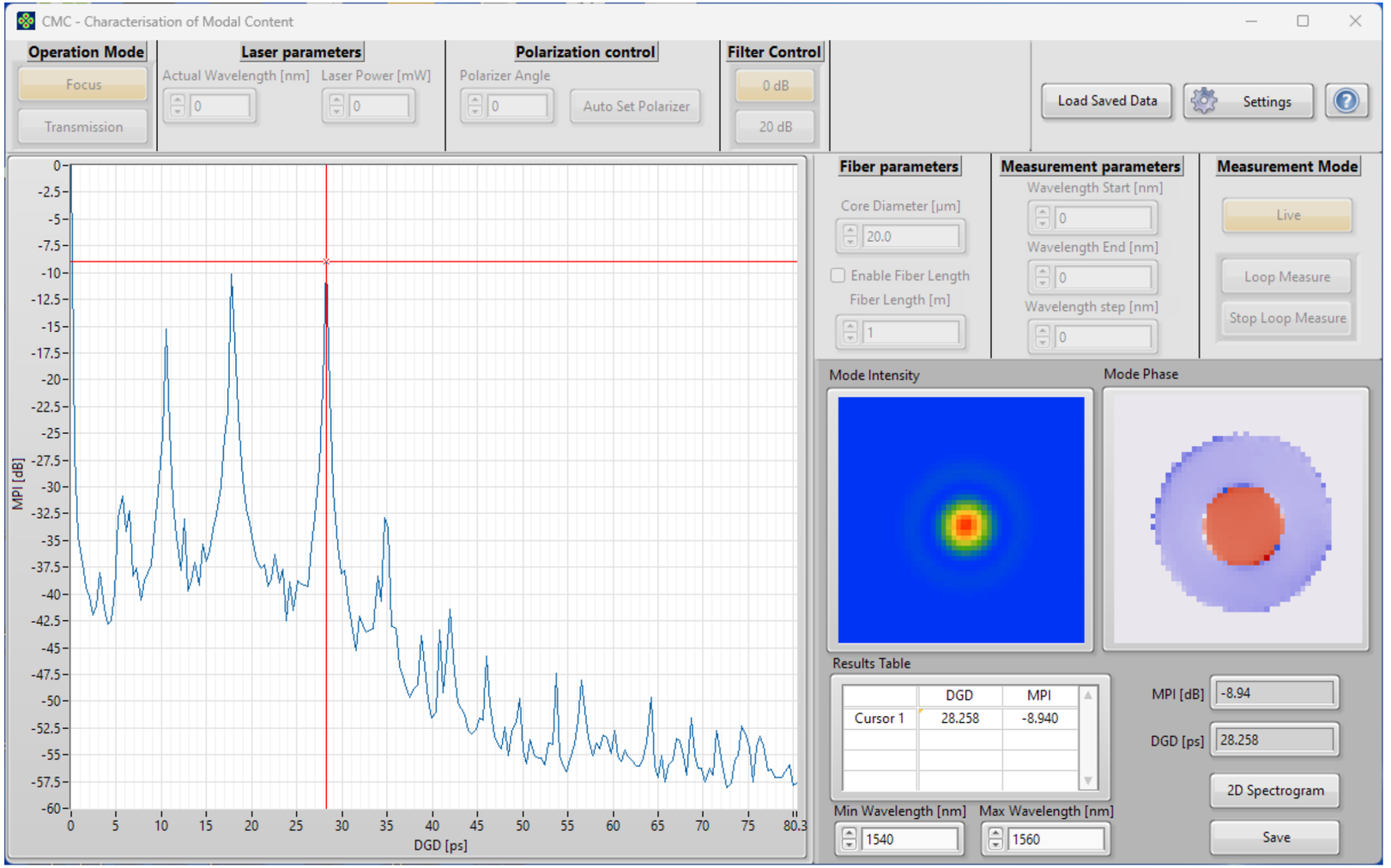

- Measures hollow core and few mode fibers, up to 400 µm in diameter
- Calculates the relative intensity of high order modes compared to the most excited mode
- Calculates the DGD of the propagation modes
- Loop measurement mode enables real time measurement

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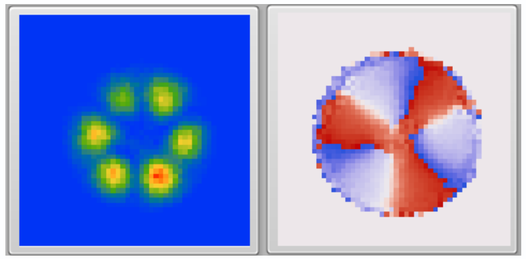
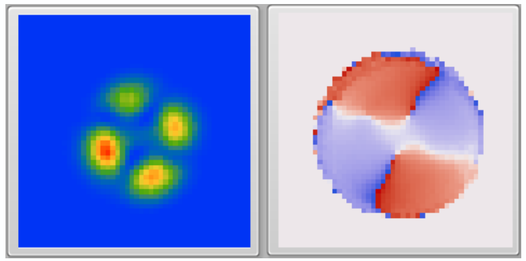
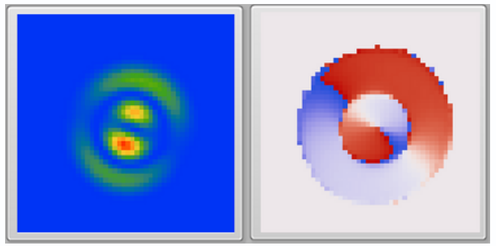
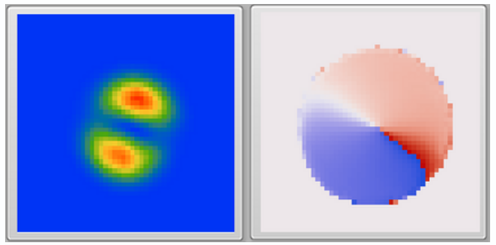
CMC-1550 Modal Content Analyser

The two colors indicate different signs of the electric field values.

Mode Pattern	Mode Intensity	Mode Phase
LP31		
LP21		

Mode Pattern	Mode Intensity	Mode Phase
LP12		
LP11		

Please contact us

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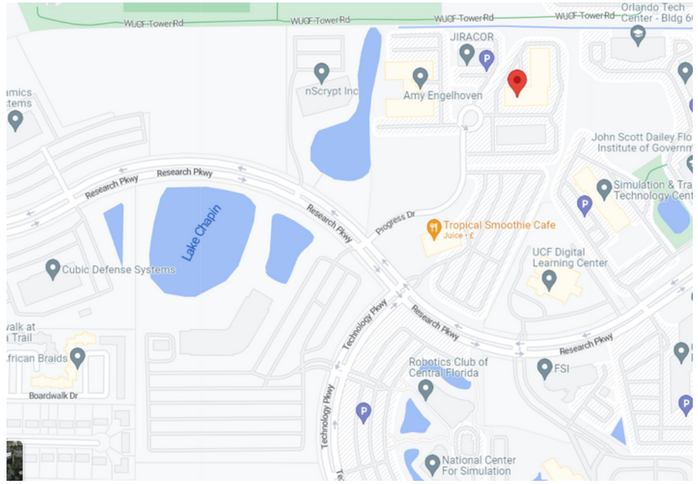
Arden Photonics Ltd
Royston House,
267 Cranmore Boulevard,
Shirley, Solihull,
B90 4QT, UK
+44 (0) 121 733 7721
enquiries@ardenphotonics.com

Rest of the World

America

Arden Photonics, LLC
Central Florida Research Park
3259 Progress Drive, Orlando,
FL 32826, USA
+1 727 504 8748
enquiries@ardenphotonics.com



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