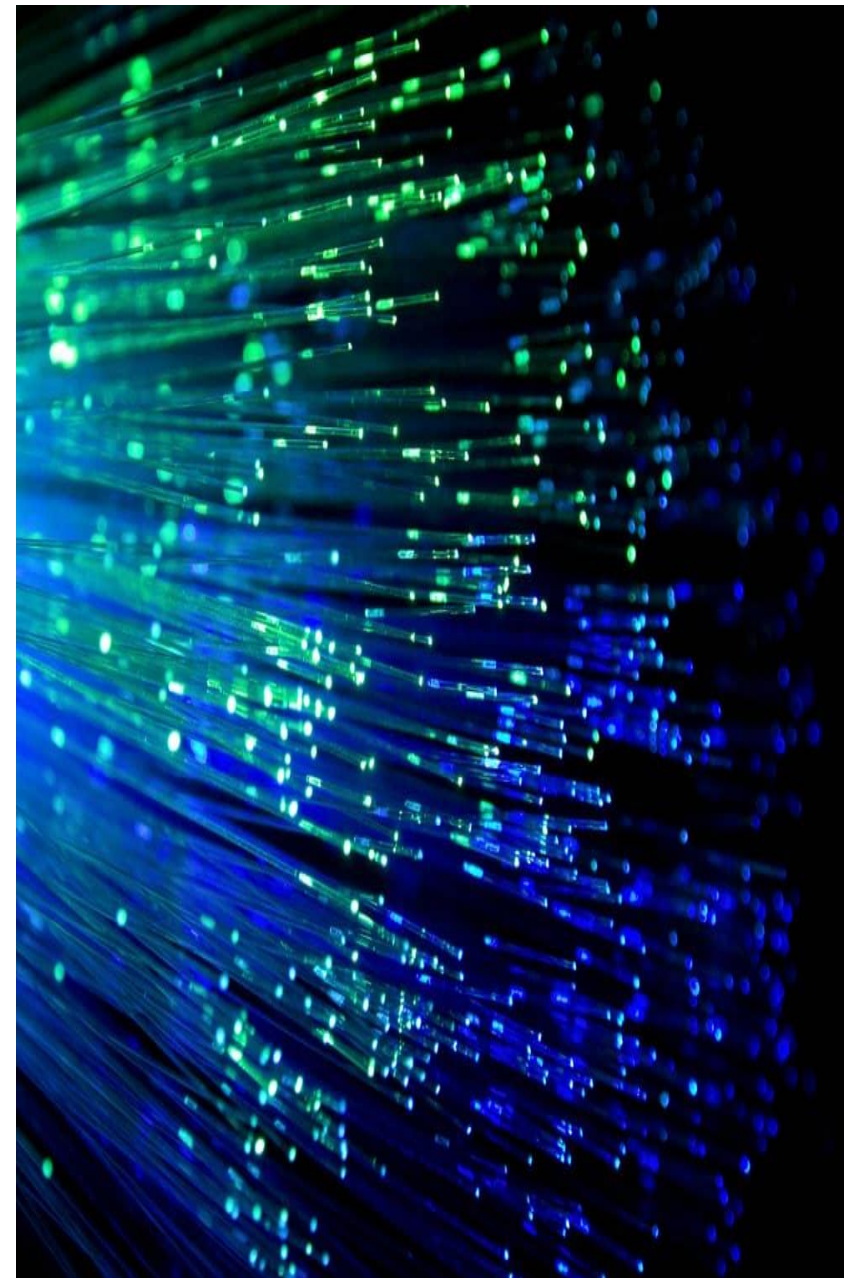




# Arden Photonics Ltd

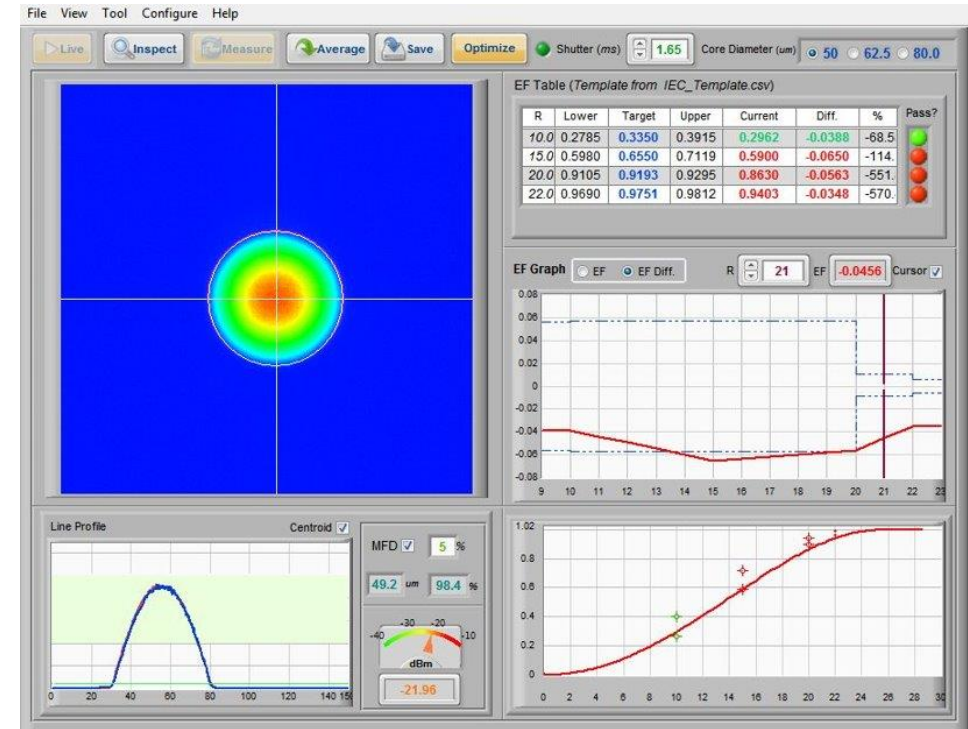
- **Founded in 2001**
- **Based near Birmingham, UK**
- **Develop, manufacture and sell innovative Test and Measurement products for the photonics industry**





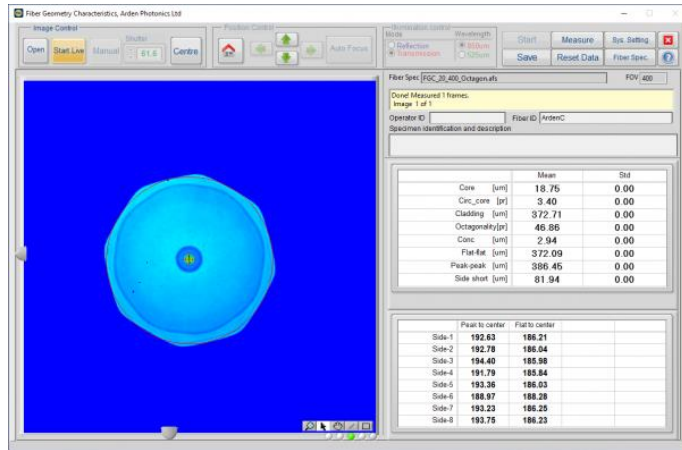
# Our history – Encircled Flux measurement

## MPX Encircled Flux meter

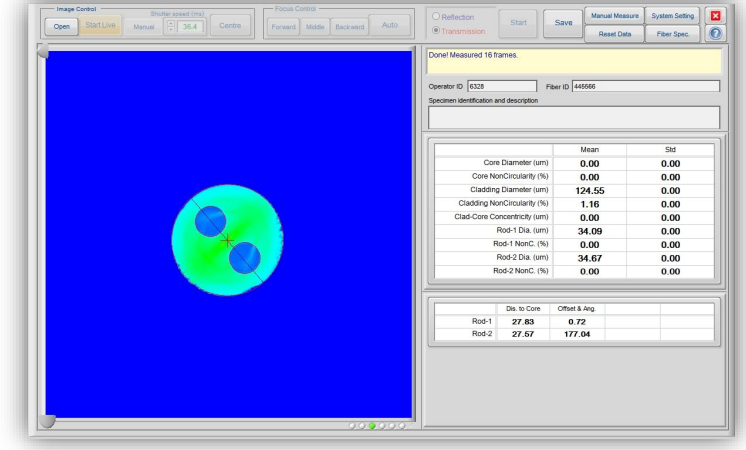
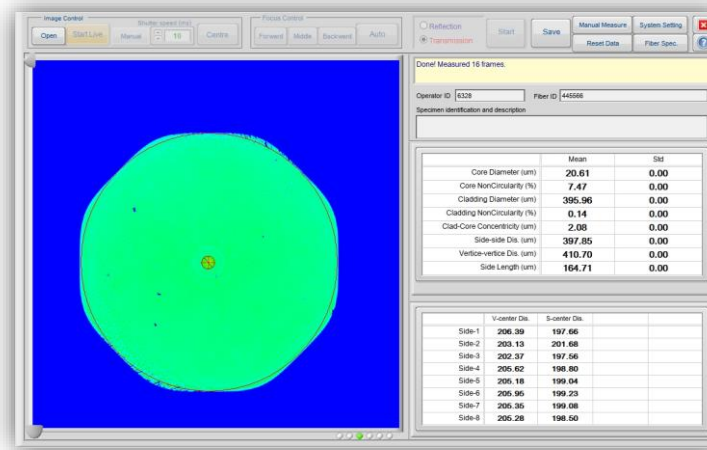


- Measuring loss of mm fibres and cables
- Analysing modal output of VCSELs

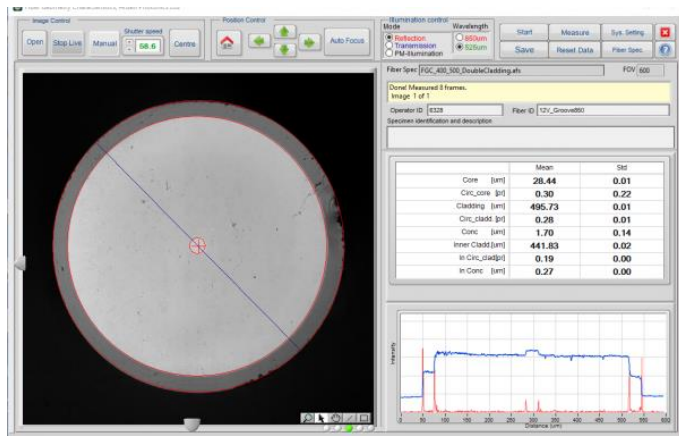
# Examples – Specialty fibers



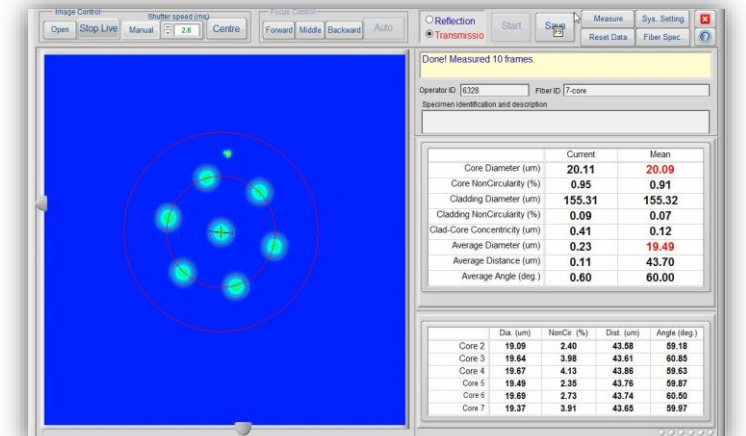
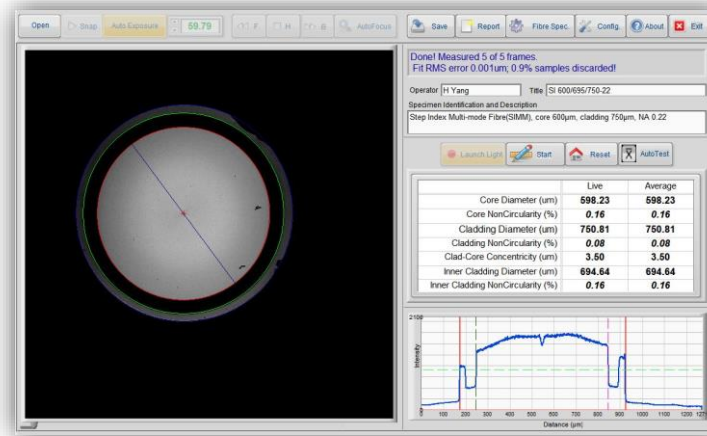
Non-circular fiber



Polarisation Maintaining fiber

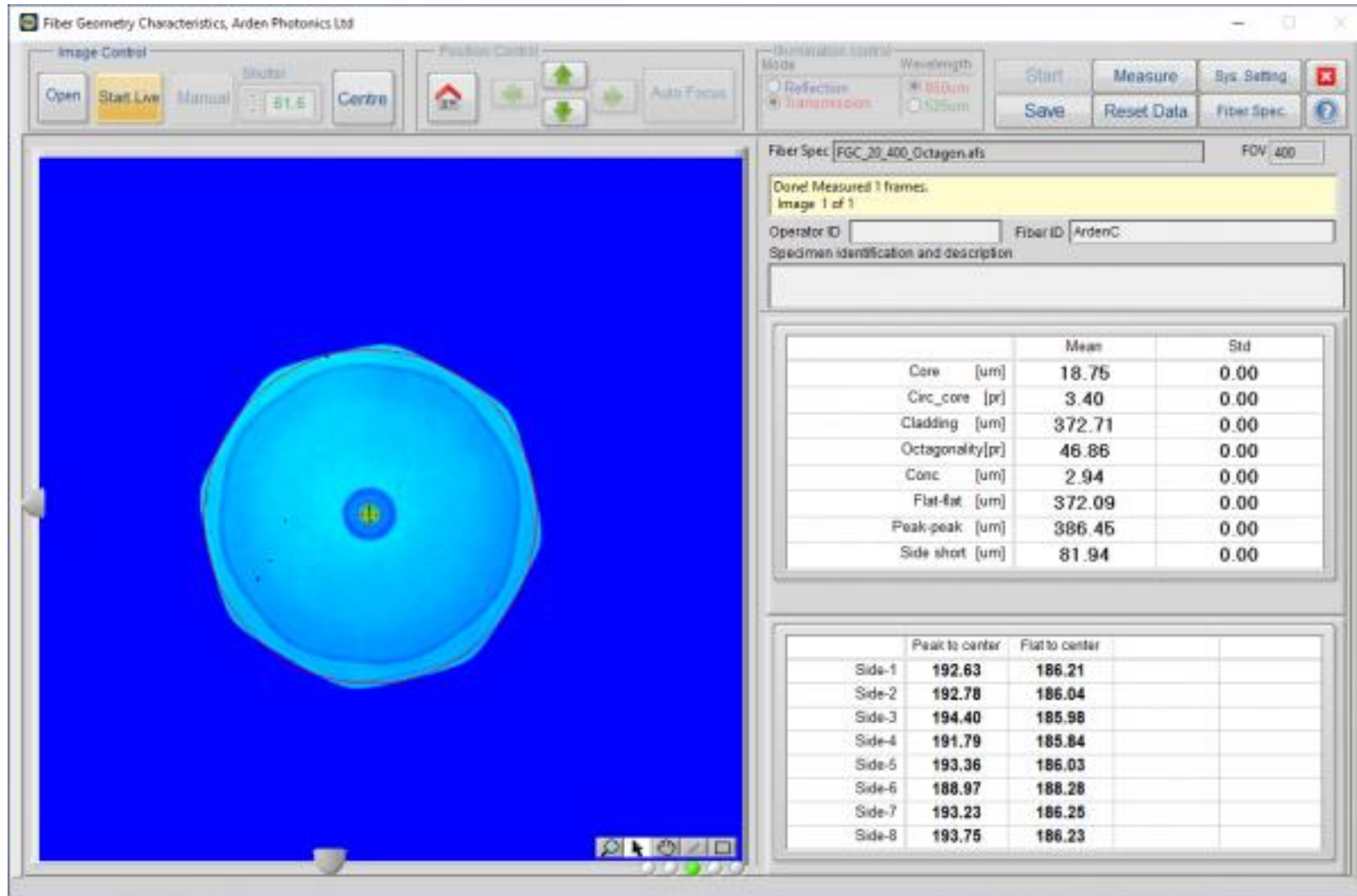


Dual-clad fiber

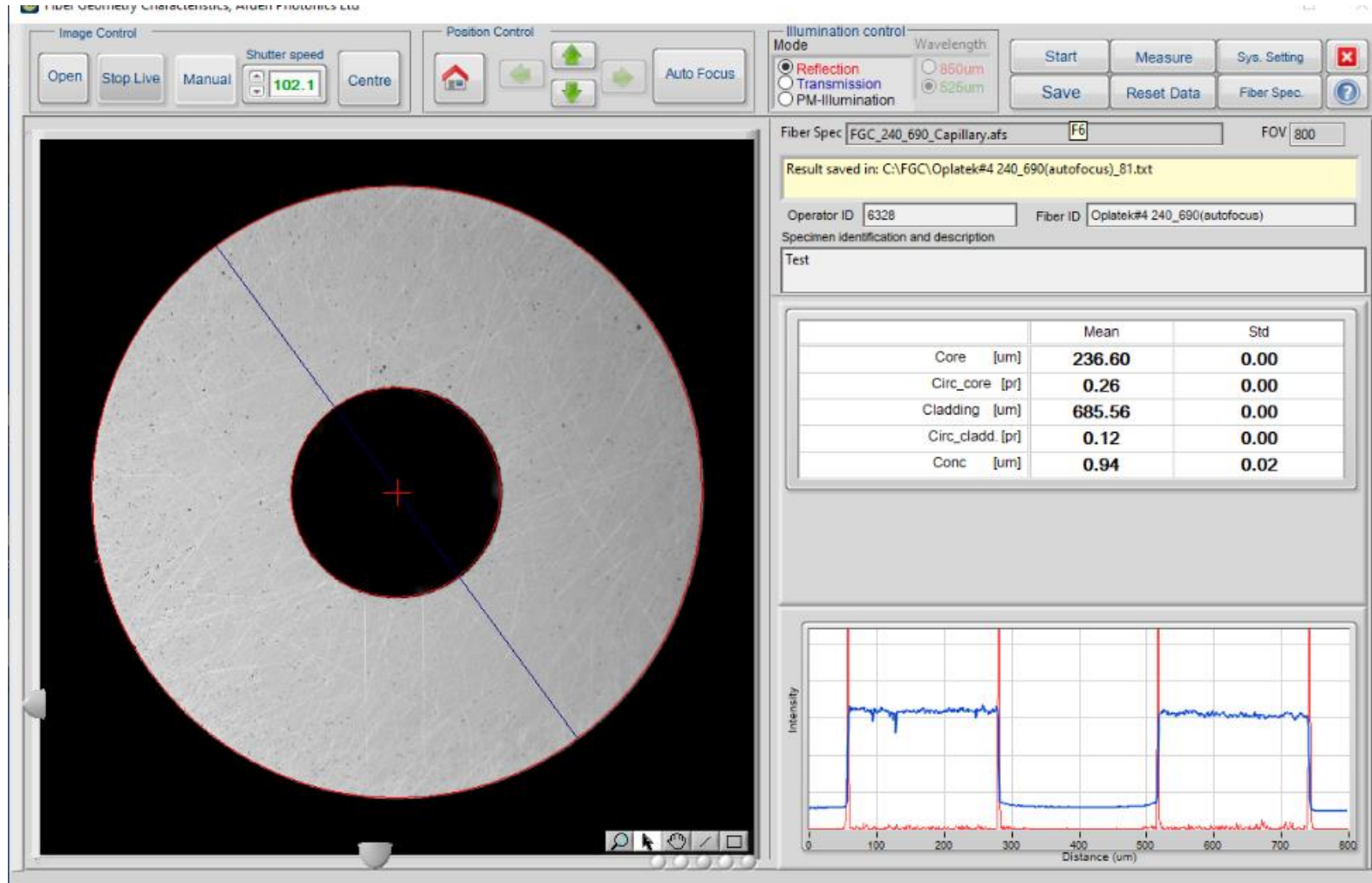


Multi-core fiber

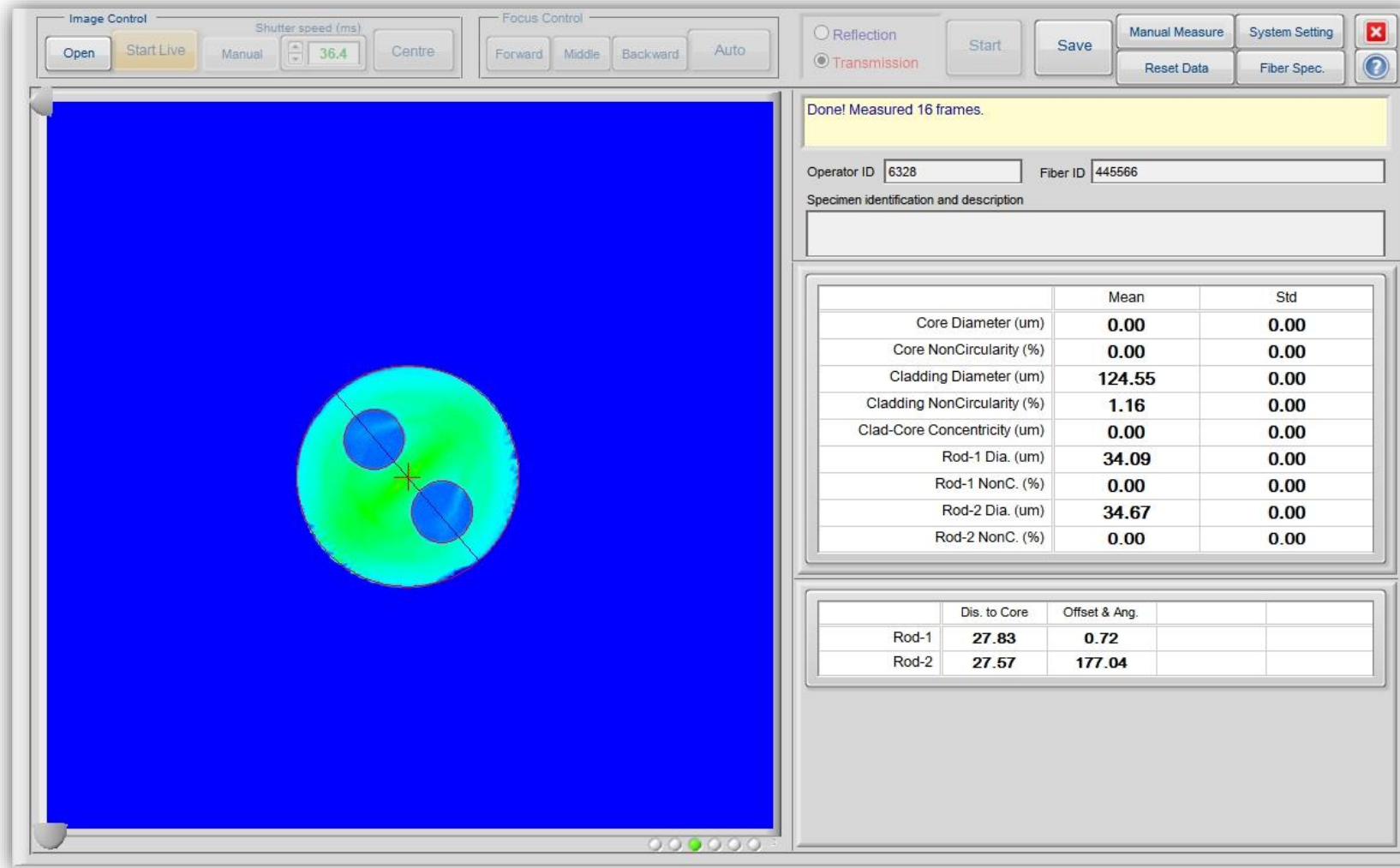
# Examples – Non-circular fibers



# Examples – Capillaries



# Examples – Polarisation Maintaining fibers



The software interface displays a fiber cross-section image on the left, showing two cores (blue) within a cladding (green). The right side contains control panels and data tables.

**Image Control:** Open, Start Live, Manual, Shutter speed (ms) 36.4, Centre

**Focus Control:** Forward, Middle, Backward, Auto

**Measurement Mode:**  Reflection,  Transmission

**Buttons:** Start, Save, Manual Measure, System Setting, Reset Data, Fiber Spec.

**Status:** Done! Measured 16 frames.

**Operator ID:** 6328 **Fiber ID:** 445566

**Specimen identification and description:**

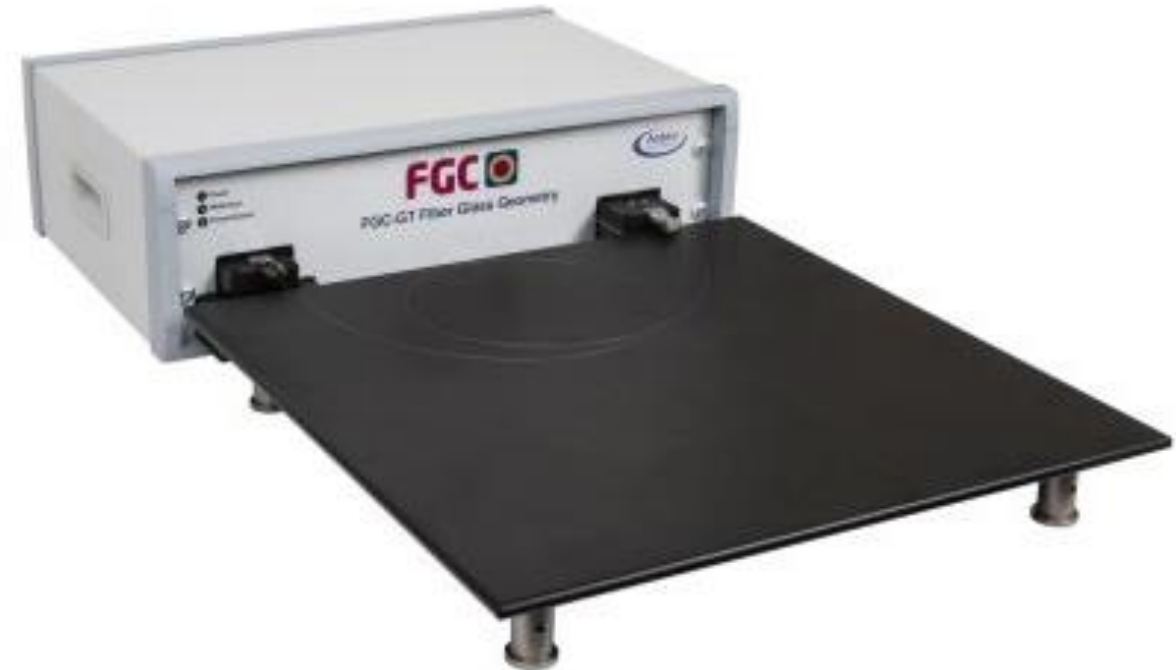
	Mean	Std
Core Diameter (um)	0.00	0.00
Core NonCircularity (%)	0.00	0.00
Cladding Diameter (um)	124.55	0.00
Cladding NonCircularity (%)	1.16	0.00
Clad-Core Concentricity (um)	0.00	0.00
Rod-1 Dia. (um)	34.09	0.00
Rod-1 NonC. (%)	0.00	0.00
Rod-2 Dia. (um)	34.67	0.00
Rod-2 NonC. (%)	0.00	0.00

	Dis. to Core	Offset & Ang.		
Rod-1	27.83	0.72		
Rod-2	27.57	177.04		

# Our Present – complete fibre geometry

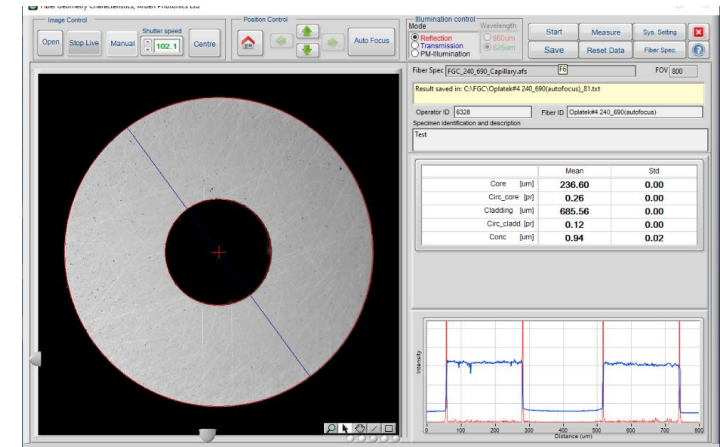
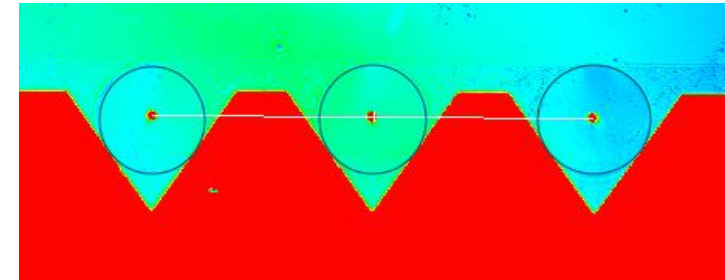
## FGC Fiber Glass Geometry System

- Complete solution for measuring dimensions of standard and specialty fibers
- Fibers up to 1mm diameter
- Calibrated to international standards
- Production or R&D environments
- Can measure:
  - core and cladding diameters,
  - core and cladding non-circularities,
  - core-to-cladding concentricity,
  - position of cores in multicore fibers
  - position of stress rods in PM fibers
  - etc...



# Our future

- Recent Customer-led developments
  - FGC measures arrays
  - FGC measures capillaries
  
- Fiber coating geometry - 2020
  
- S2 measurement - 2020







# Ways we work

- IEC
  - Work with TC86A to establish measurement standards for specialty fibres
  - Focussing on active fibres – NA / Geometry / Attenuation /
- National Physical Labs, London
  - **19SIP05** Technology Transfer of Photonic Waveguide Characterisation
  - **A4i** Extend calibration range of geometry measurements to LDF