



nPA-600

Refractive Index Profiler

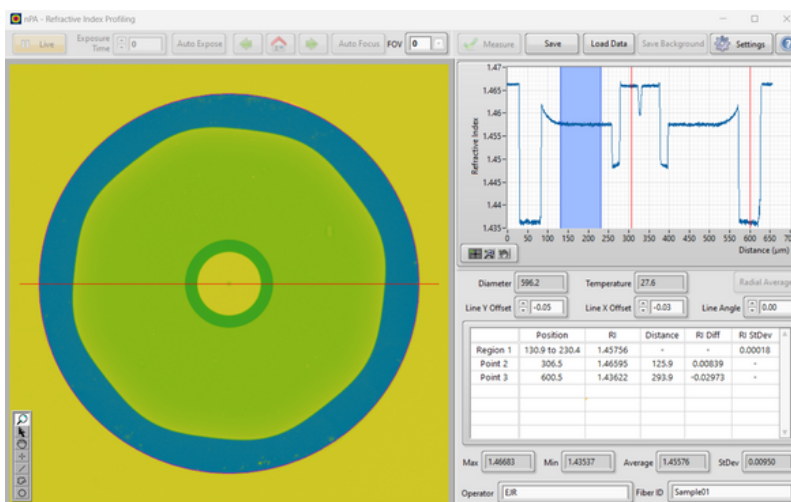


Measure fibers up to 600 μm

The nPA-600 Refractive Index Profiler uses a modified refracted near-field technique to analyse a fiber end-face to determine the full 2D refractive index distribution. The nPA-600 is the quick and easy way to get the Refractive Index data you need to verify your specialty fiber design and manufacturing processes. The nPA-600 comes with the nPA v3.0 software which boosts system performance, improves user experience, and the API allows the nPA-600 to integrate to other systems seamlessly. Optional plug-ins enable new functionalities such as measuring the geometry of single-mode and PM fibers.

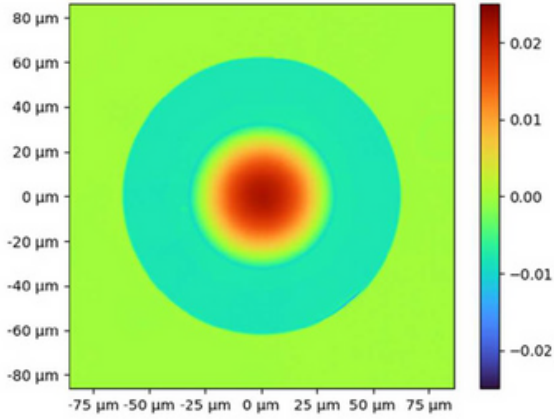
Features & Benefits

- Measure fibers up to 600 μm in diameter
- Prepare and measure a fiber sample in under 2 minutes (2D measurement in seconds)
- Measure non-circularly symmetric fibers – good for PM, octagonal, multi-core fibers
- Preinstalled with production-ready nPA v3.0 software
 - Region cursor markers give an average of the refractive index of the marked region
 - Option to display target refractive index template alongside with actual fiber profile
 - API facilitates users customisation and integration with other systems
 - Various measurement and output options for better system performance and user experience
 - Optional plug-ins enabling new functionalities
- Traceable calibration and new calibration tools

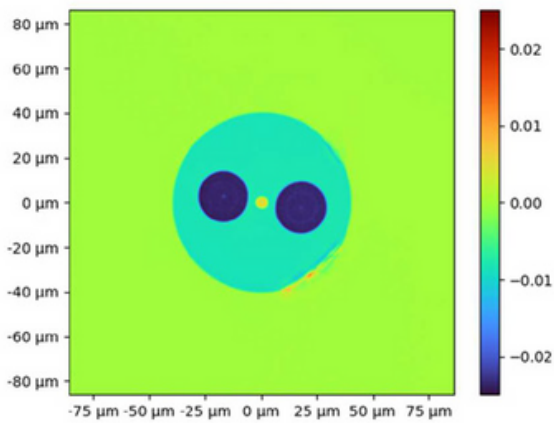
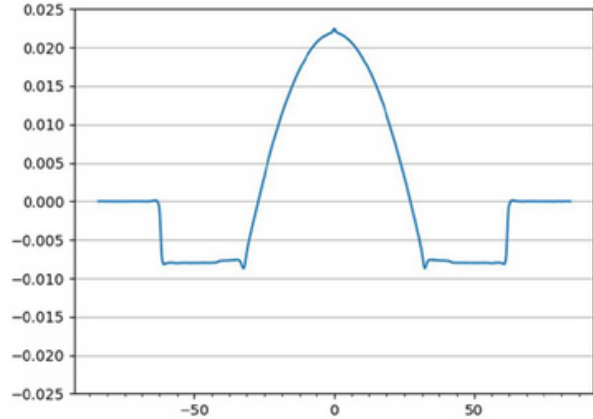


The nPA-600 with nPA v3.0 software measures fibers (including octagonal fiber) up to 600 μm in diameter with customised measurement points and regions.

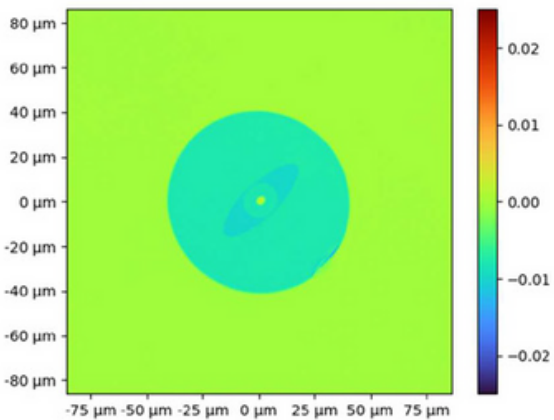
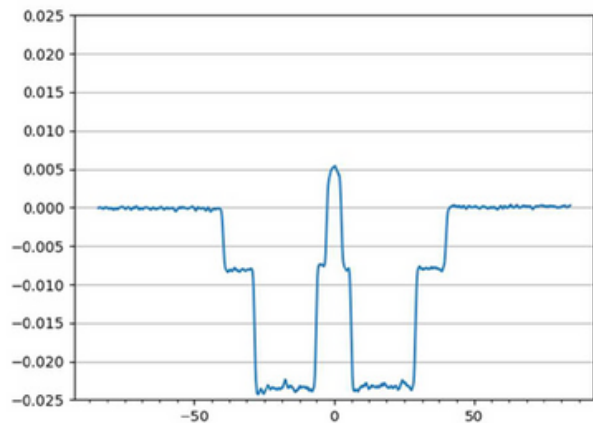
The nPA-600 measures most fiber types:



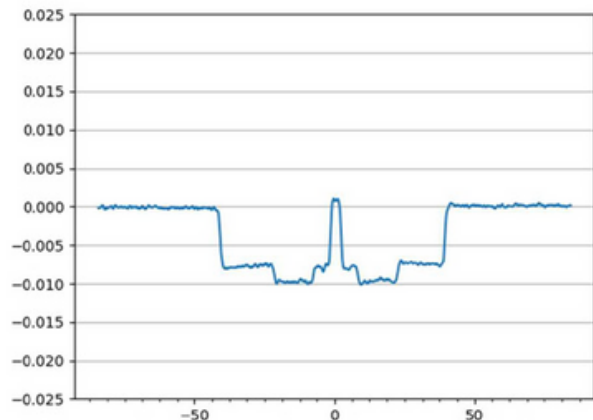
Graded index multimode fiber



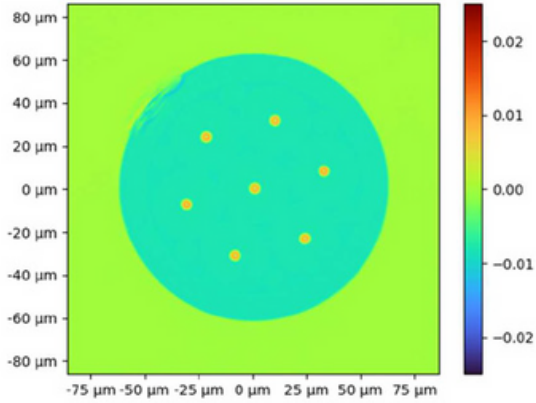
PANDA PM fiber



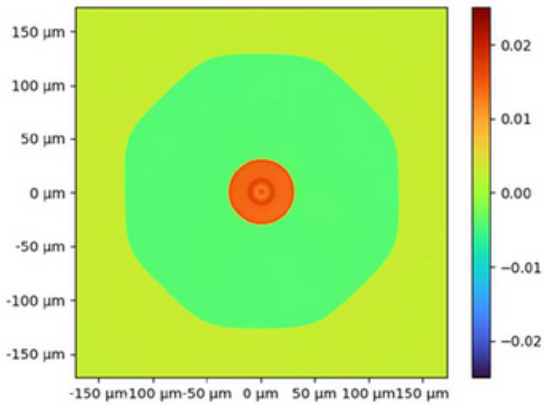
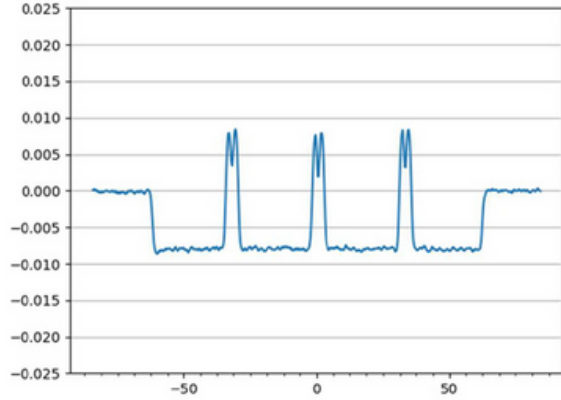
PM fiber with elliptical stress rods



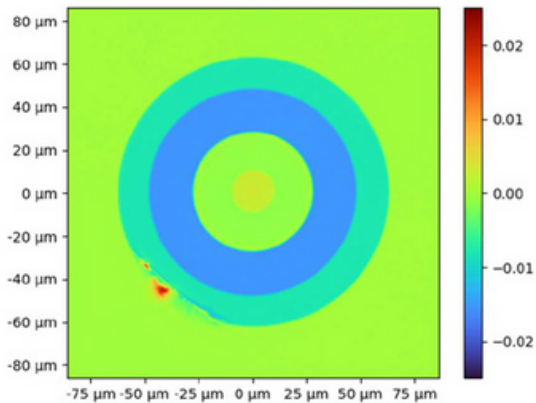
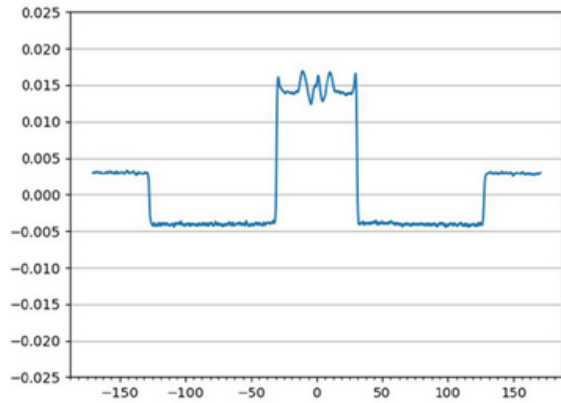
The nPA-600 measures most fiber types:



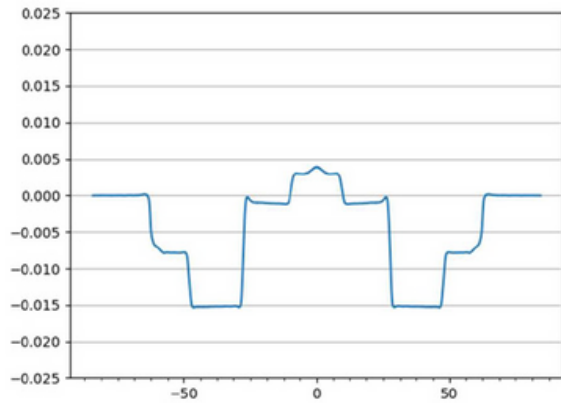
7-core multicore fiber



Octagonal active fiber with pedestal surrounding the core



Calibration fiber

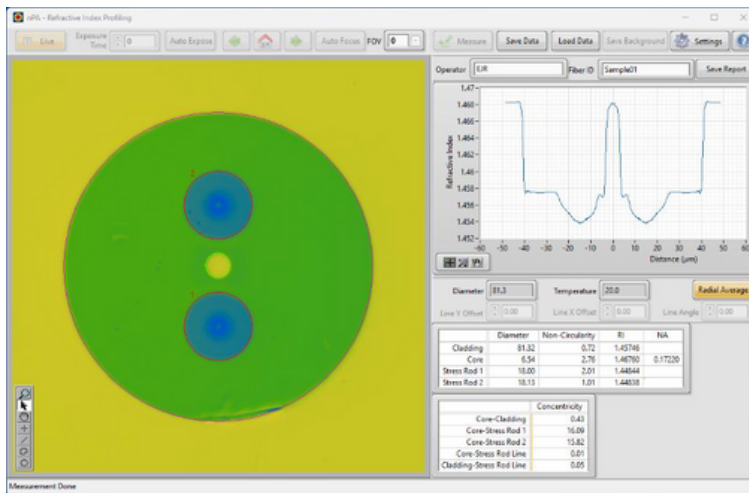


Optional Plug-ins (Available for nPA 3.0 software onwards)

The optional plug-ins further extend the functionalities of nPA-600. Two optional plug-ins are available for measuring the fiber geometry of specialty fibers.

- nPA-SPI01 : measures the geometry of Panda-style PM fibers, with cladding diameters 80 - 400 μm .
- nPA-SPI02 : measures the geometry of single-mode fibers, with cladding diameter 80 - 400 μm .

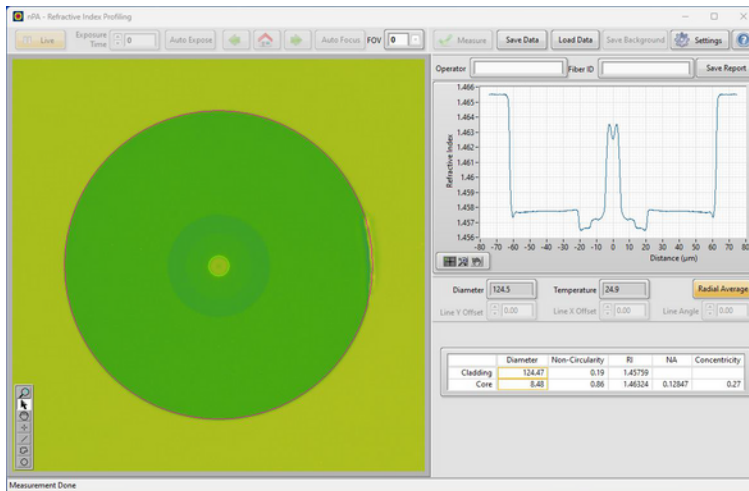
PM fiber measurement using SPI-01 plug-in



Measured values:

- Cladding – diameter, non-circularity, average refractive index
- Core – diameter, non-circularity, average refractive index
- Stress Rods – diameter, non-circularity, average refractive index
- Concentricity – core-clad, core-stress rod
- Stress Rod Line offset to core and cladding

Single mode fiber measured using SPI-02 plug-in



Measured values:

- Cladding – diameter, non-circularity, average refractive index
- Core – diameter, non-circularity, average refractive index
- Core-Clad Concentricity



nPA-600

Refractive Index Profiler

Technical Specifications

Measurement Capabilities

Refractive Index Repeatability*	0.0002
Fiber Diameter	40 to 600 μm
Fiber Material	Silica glass
2D Measurement Time**	< 10 sec
Measurement Range***	+/- 0.025

*Repeatability is measured on a 125 μm MM fiber sample without removing from the measurement cell

** averaging 5 images

*** around reference fluid index

Optical

Measurement Wavelength	630 nm
Maximum Field of View	830 μm
Image Sensor	APS-C CMOS, 6480 x 4860 pixels resolution

Physical

Weight	6 kg
Size	0.5 m x 0.16 m x 0.13 m
Operating Temperature	15 - 30°C
Performance Specification	Validated at 22°C
Computer Requirements	All systems are supplied with a computer running up-to-date Windows operating system
Data Interface	1 X USB 3.0 (USB A to USB B: 1m cable supplied)



nPA-600

Refractive Index Profiler

Ordering Information

Part Number	Description
nPA-600	Optical Fiber Refractive Index Profiler for full 2D measurement of optical fibers with diameters between 40 μm and 600 μm . Including optical unit, measurement cell, nPA-SOC oil cell, nPA-IL-1.4680 refractive index liquid kit, nPA-CS100 set of cover slips, nPA-FTK-600 fiber test kit, nPA-CC rigid carrying case, nPA-F0270 and nPA-F0620 ferrule pins, cables, software package, APL-DC desktop computer, keyboard and mouse.

Plug-ins	Description
nPA-SPI01	nPA Software Plugin for measurement of RI and geometry of Panda-style PM Fibers
nPA-SPI02	nPA Software Plugin for measurement of RI and geometry of Single Mode Fibers

Ferrule Pins	Description
nPA-F0125	nPA Fiber guide assembly for optical fiber with outer diameter of up to 125 μm
nPA-F0230	nPA Fiber guide assembly for optical fiber with outer diameter of 125 - 230 μm
nPA-F0270	nPA Fiber guide assembly for optical fiber with outer diameter of 230 - 270 μm
nPA-F0440	nPA Fiber guide assembly for optical fiber with outer diameter of 270 - 440 μm
nPA-F0520	nPA Fiber guide assembly for optical fiber with outer diameter of 440 - 520 μm
nPA-F0570	nPA Fiber guide assembly for optical fiber with outer diameter of 520 - 570 μm
nPA-F0620	nPA Fiber guide assembly for optical fiber with outer diameter of 570 - 620 μm

Optional Accessories	Description
nPA-IL-1.4680	Bottle of Immersion liquid, 10 ml, (Refractive Index = 1.4680, measured at 589 nm and 25°C) for refilling nPA measurement cell assembly, including syringes and nozzles
nPA-SOC	Replacement oil cell for nPA-600
nPA-CS100	Set of 100 replacement cover slips for use with nPA-600 oil cell
nPA-CC	nPA-600 rigid carrying case
nPA-600EW3	nPA-600 Refractive Index Profiler extended warranty covering parts and labour for 3 years from purchase, return to base. Cover excludes camera
nPA-600EW5	nPA-600 Refractive Index Profiler extended warranty covering parts and labour for 5 years from purchase, return to base. Cover excludes camera

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