



# FGC-P

## Fiber Coating Geometry System



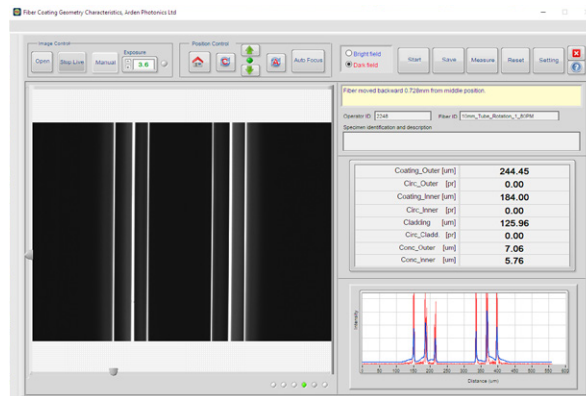
The FGC-P Fiber Coating Geometry System is a compact, trustworthy solution for measuring the geometry characteristics of optical fiber coating, of fibers with a coating diameter from 100  $\mu\text{m}$  to 260  $\mu\text{m}$ .

This user-friendly fully automated system provides a fast, direct measurement of fiber coating geometry parameters including:

- coating diameter
- coating non-circularity
- coating-cladding concentricity

### Features and benefits

- Novel liquid cell design enables measurement of thin fibers down to 60/100  $\mu\text{m}$
- Measures dual layer coatings – useful for many standard and specialty fibers
- Fiber can be rotated up to 36 different radial positions, enables accurate measurement of coating concentricity and non-circularity
- Standards compliant – uses the side-view reference test method described in IEC-60793-1-21





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### Technical Specification

Measurement Capability	
Fiber Type	SM, MM, PM
Coating Material	Dual acrylate
Coating Diameter	100 $\mu\text{m}$ to 260 $\mu\text{m}$
Layer Thickness	> 10 $\mu\text{m}$
Measurement Time*	< 10s per angular position
Angular Positions	Customisable, 8 to 36

Repeatability**	
Outer Coating Diameter	< 0.5 $\mu\text{m}$
Outer Coating Non-Circularity	< 0.5%
Inner Coating Diameter	< 0.8 $\mu\text{m}$
Inner Coating Non-Circularity	< 0.8%
Outer Coating-to-Cladding Concentricity	< 0.5 $\mu\text{m}$
Inner Coating-to-Cladding Concentricity	< 0.8 $\mu\text{m}$

Optical	
Illumination – Side View	Darkfield, 525 nm
Max. Field of View	580 $\mu\text{m}$
Image Sensor	1.1-inch CMOS, 4112 x 3008 pixels resolution
Exposure Range	0.1 ms to 100 ms exposure time

Physical	
Weight	6 kg (with carry case 12kg)
Size	0.5 x 0.2 x 0.2 m
Operating Temperature***	10 – 30°C
Power Supply	15 V (external power supply supplied)
Power Consumption	60 W
Computer Requirements	All FGC systems are supplied with a computer running up-to-date Windows operating system
Data Interface	1 x USB 3.0 (USB B to USB A : 1m cable supplied)

\*Analysing 100 scan lines and averaging 5 images

\*\*Repeatability is measured using a 125/245 dual acrylate coated MM fiber sample over 12 angular positions without removing from the FGC-P

\*\*\*Performance specification validated at 22° C



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### Ordering Information

Part number	Description
<b>FGC-P</b>	FGC-P Fiber Coating Geometry System for measurement of optical fibers with diameters up to 260 $\mu\text{m}$ . Including optical unit; 3 x FGC-P-FTA-245 tube assembly; 3 x FGC-P-FTA-200 tube assembly; 3 x FGC-P-FTA-100 tube assembly; 3 x FGC-P-GLA tube packs; 1 x FGC-P-IL-1.5840 bottle of immersion liquid; 1 x FGC-P-TM tube storage block; 1 x FGC-P-CC carrying case; cables; desktop computer pre-installed with system software.
<b>FGC-P-GLA</b>	Glass tubes, pack of 10, replacement for use in FGC-P-FTA Fiber Tube Assembly
<b>FGC-P-IL-1.5840</b>	Bottle of Immersion liquid, 10ml, ( Refractive Index = 1.5840 ) for refilling FGC-P tube assembly
<b>FGC-P-IL-1.5600</b>	Bottle of Immersion liquid, 10ml, ( Refractive Index = 1.5600 ) for refilling FGC-P tube assembly
<b>FGC-P-IL-1.6000</b>	Bottle of Immersion liquid, 10ml, ( Refractive Index = 1.6000 ) for refilling FGC-P tube assembly
<b>FGC-P-FTA-245</b>	FGC-P Fiber Tube Assembly for 245 $\mu\text{m}$ coatings, contains glass tube plus upper and lower fiber guides with 270 $\mu\text{m}$ ferrule fitted.
<b>FGC-P-FTA-200</b>	FGC-P Fiber Tube Assembly for 200 $\mu\text{m}$ coatings, contains glass tube plus upper and lower fiber guides with 230 $\mu\text{m}$ ferrule fitted.
<b>FGC-P-FTA-100</b>	FGC-P Fiber Tube Assembly for 100 $\mu\text{m}$ coatings, contains glass tube plus upper and lower fiber guides with 126 $\mu\text{m}$ ferrule fitted.
<b>FGC-P-FTA-CUST</b>	FGC-P Fiber Tube Assembly for custom fiber coatings, contains glass tube plus upper and lower fiber guides with custom ferrule fitted.
<b>FGC-P-TM</b>	FGC-P glass tube storage block, for holding 6 tube assemblies
<b>FGC-P-GUEW3</b>	FGC- P coating geometry system, extended warranty covering parts and labour for 3 years from purchase, return to base. Cover excludes camera.
<b>FGC-P-GUEW5</b>	FGC- P coating geometry system, extended warranty covering parts and labour for 5 years from purchase, return to base. Cover excludes camera.
<b>FGC-P-CC</b>	FGC-P rigid carrying case



北京: 010-65978180/上海: 021-33687728/深圳: 0755-23995789  
网站: [www.linpu.com.cn](http://www.linpu.com.cn) 电话: 400-810-6068