FGC-P
Fiber Coating Geometry System

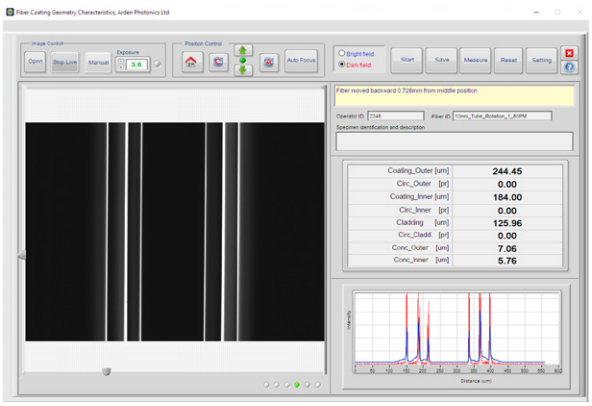
The FGC-P Fiber Coating Geometry System is a compact, trustworthy solution for measuring the geometry characteristics of optical fiber coating, of fibers with a coating diameter from 100 µm to 260 µm.

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 µm
- 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



Manufactured by
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Technical Specification

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

Repeatability**	
Outer Coating Diameter	< 0.5 µm
Outer Coating Non-Circularity	< 0.5%
Inner Coating Diameter	< 0.8 µm
Inner Coating Non-Circularity	< 0.8%
Outer Coating-to-Cladding Concentricity	< 0.5 µm
Inner Coating-to-Cladding Concentricity	< 0.8 µm

Optical	
Illumination – Side View	Darkfield, 525 nm
Max. Field of View	580 µm
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
FGC-P	FGC-P Fiber Coating Geometry System for measurement of optical fibers with diameters up to 260 µm. 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.
FGC-P-GLA	Glass tubes, pack of 10, replacement for use in FGC-P-FTA Fiber Tube Assembly
FGC-P-IL-1.5840	Bottle of Immersion liquid, 10ml, (Refractive Index = 1.5840) for refilling FGC-P tube assembly
FGC-P-IL-1.5600	Bottle of Immersion liquid, 10ml, (Refractive Index = 1.5600) for refilling FGC-P tube assembly
FGC-P-IL-1.6000	Bottle of Immersion liquid, 10ml, (Refractive Index = 1.6000) for refilling FGC-P tube assembly
FGC-P-FTA-245	FGC-P Fiber Tube Assembly for 245 µm coatings, contains glass tube plus upper and lower fiber guides with 270 µm ferrule fitted.
FGC-P-FTA-200	FGC-P Fiber Tube Assembly for 200 µm coatings, contains glass tube plus upper and lower fiber guides with 230 µm ferrule fitted.
FGC-P-FTA-100	FGC-P Fiber Tube Assembly for 100 µm coatings, contains glass tube plus upper and lower fiber guides with 126 µm ferrule fitted.
FGC-P-FTA-CUST	FGC-P Fiber Tube Assembly for custom fiber coatings, contains glass tube plus upper and lower fiber guides with custom ferrule fitted.
FGC-P-TM	FGC-P glass tube storage block, for holding 6 tube assemblies
FGC-P-GUEW3	FGC- P coating geometry system, extended warranty covering parts and labour for 3 years from purchase, return to base. Cover excludes camera.
FGC-P-GUEW5	FGC- P coating geometry system, extended warranty covering parts and labour for 5 years from purchase, return to base. Cover excludes camera.
FGC-P-CC	FGC-P rigid carrying case

For North American sales enquiries call **(727) 478-2651** or email us on **sales@ardenphotonics.com**

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