



FGC-G

Fiber Glass Geometry Measurement System



The FGC range is the complete solution for measuring the dimensions of standard and specialty fiber in both production and R&D environments. The FGC-G comes in 2 different models:

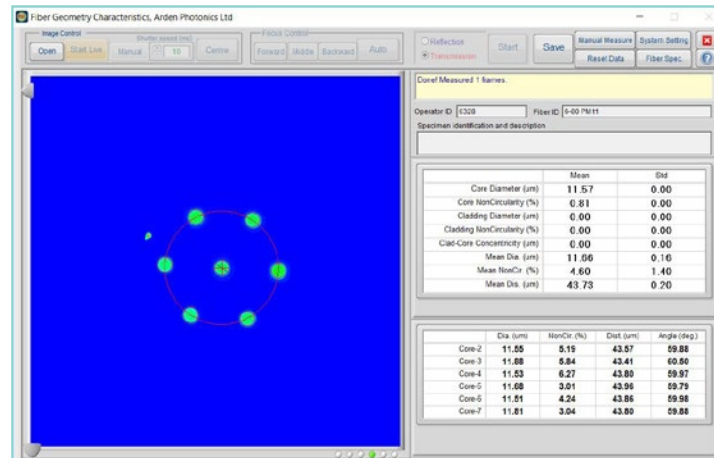
- FGC-GT – fiber glass geometry for fibers up to 400 μm diameter
- FGC-GS – fiber glass geometry for fibers up to 1000 μm diameter

Features & Benefits

- Measures the widest range of fiber sizes and types
 - single unit solution means less bench space, reduced training
- Standards compliant
 - calibrated to international standards, ensuring confidence in its accuracy
- Production ready
 - reliable, repeatable, operator-independent results in seconds



Arden Fiber Holder



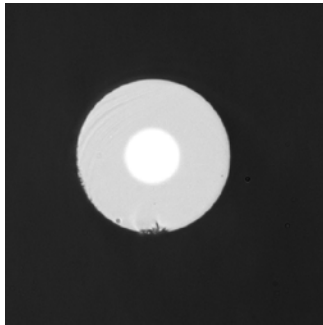
FGC-G software user interface main screen



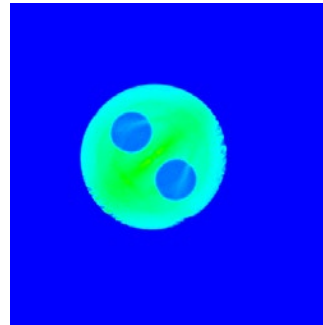
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Fiber Glass Geometry Measurement System

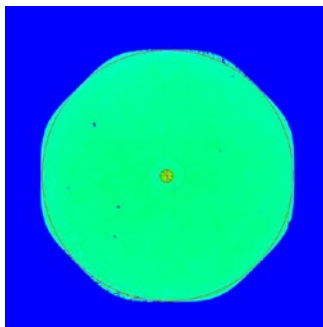
Fiber Gallery



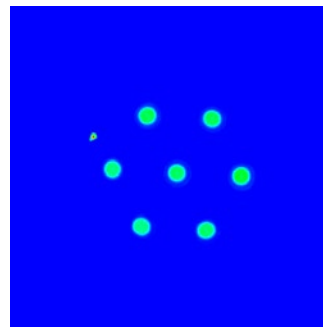
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Standard



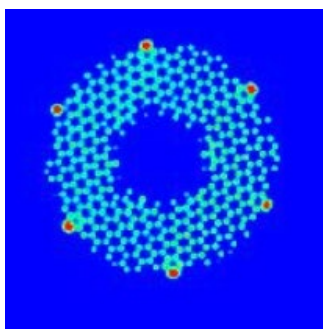
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PM



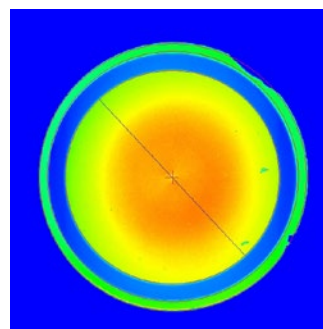
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Octagonal



<<
Multicore



<<
Micro-Structured



<<
Dual Clad



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Technical Specification

Optical	FGC-GT*	FGC-GS**
Max Field of View	600 µm	1200 µm
Fiber Illumination – Reflection	Darkfield illumination, 850nm LED***	Darkfield illumination, 850nm LED***
Fiber Illumination – Transmission	Multiple LED array, 850nm***	Multiple LED array, 850nm***

Repeatability	Singlemode	Multimode	Multimode
Core Diameter	< 0.05 µm	< 0.08 µm	< 0.1 µm
Cladding Diameter	< 0.05 µm	< 0.05 µm	< 0.25 µm
Core Non-Circularity	< 1.0%	< 0.5%	< 0.05%
Cladding Non-Circularity	< 0.1%	< 0.1%	< 0.1%
Core-To-Cladding Concentricity	< 0.06 µm	< 0.05 µm	< 0.15 µm

Measurement Capability		
Measurement Time	< 10 seconds (excluding fiber prep)	< 10 seconds (excluding fiber prep)
Fiber Diameter	up to 400 µm	up to 1000 µm
Special Fibers	Dual clad, Octagonal, PM, Multicore, PCF, etc.	Dual clad, Octagonal, PM, Multicore, PCF, etc.

Physical		
Weight	11kg (with carry case 33kg)	11kg (with carry case 33kg)
Size of FGC unit	0.5 x 0.5 x 0.2 m	0.5 x 0.5 x 0.2 m
Size of fiber handling bench	0.5 x 0.5 x 0.1 m	0.5 x 0.5 x 0.1 m
Operating Temp	10 – 30°C	10 – 30°C
Humidity	5% – 95%, relative, non-condensing	5% – 95%, relative, non-condensing

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)

* Repeatability is measured on the FGC-GT using a single 125 µm fiber without removing it from the unit at 21°C, the repeatability specifications are only applicable to OM1, OM2 and singlemode fibers.

** Repeatability is measured on the FGC-GS using a single 540/600 µm fiber without removing it from the unit at 21°C.

*** May be fitted with other customized wavelengths



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Ordering Information

Part number	Description
FGC-GT	Fiber Glass Geometry System for measurement of optical fibers with diameters up to 400 μm . Including optical unit, fiber handling bench, cables, software package; desktop computer; pair of Arden holders suitable for 250 μm diameter coated fiber.
FGC-GS	Fiber Glass Geometry System for measurement of optical fibers with diameters up to 1000 μm . Including optical unit, fiber handling bench, cables, software package; desktop computer; pair of Arden holders suitable for 400 μm diameter coated fiber.
FG-H-250	Pair of Arden FGC fiber holders with 250 μm V-groove, suitable for 250 μm diameter coated fiber
FG-H-400	Pair of Arden FGC fiber holders with 400 μm V-groove, suitable for 400 μm diameter coated fiber
FG-H-600	Pair of Arden FGC fiber holders with 600 μm V-groove, suitable for 600 μm diameter coated fiber
FG-H-800	Pair of Arden FGC fiber holders with 800 μm V-groove, suitable for 800 μm diameter coated fiber
FG-H-1000	Pair of Arden FGC fiber holders with 1000 μm V-groove, suitable for 1000 μm diameter coated fiber
FG-H-XXXX	Pair of Arden FGC fiber holders with customer defined V-groove diameter
FGC-GUEW3	FGC-Glass geometry system, extended warranty covering parts and labour for 3 years from purchase, return to base. Cover excludes camera.
FGC-GUEW5	FGC-Glass geometry system, extended warranty covering parts and labour for 5 years from purchase, return to base. Cover excludes camera.
FGC-PMI	PM illuminator designed for use with the FGC

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

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