



# 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:

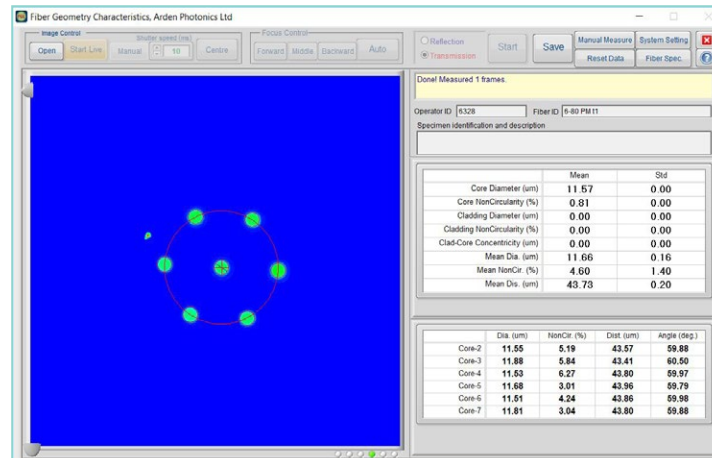
- FGC-GT – fiber glass geometry for fibers up to 400 µm diameter
- FGC-GS – fiber glass geometry for fibers up to 1000 µm diameter

### 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



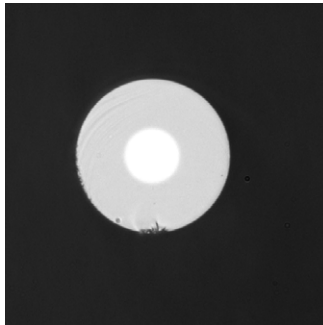
FGC-G software user interface main screen



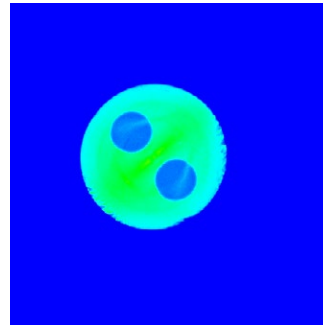
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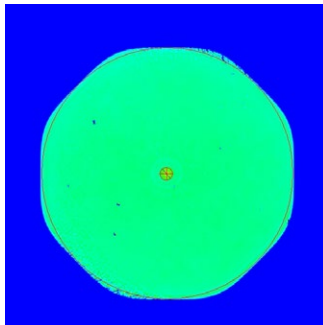
### Fiber Gallery



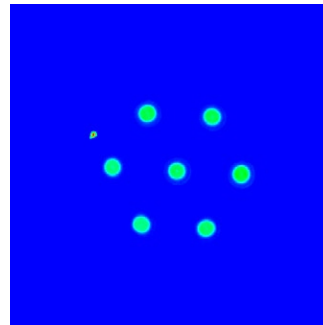
<<  
**Standard**



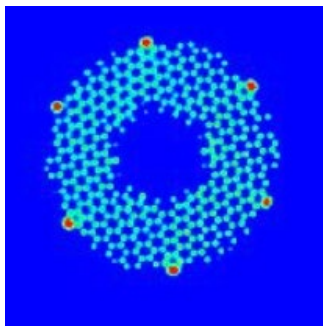
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**PM**



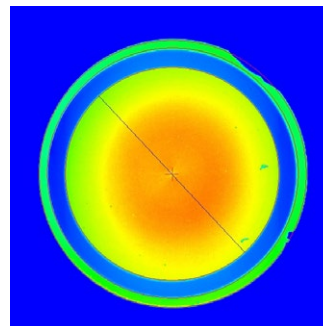
<<  
**Octagonal**



<<  
**Multicore**



<<  
**Micro-Structured**



<<  
**Dual Clad**



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### Technical Specification

Optical	FGC-GT*	FGC-GS**
Max Field of View	600 $\mu\text{m}$	1200 $\mu\text{m}$
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	20/400
Core Diameter	< 0.05 $\mu\text{m}$	< 0.08 $\mu\text{m}$	< 0.1 $\mu\text{m}$
Cladding Diameter	< 0.05 $\mu\text{m}$	< 0.05 $\mu\text{m}$	< 0.15 $\mu\text{m}$
Core Non-Circularity	< 1.0%	< 0.5%	< 0.5%
Cladding Non-Circularity	< 0.1%	< 0.1%	< 0.1%
Core-To-Cladding Concentricity	< 0.06 $\mu\text{m}$	< 0.05 $\mu\text{m}$	< 0.15 $\mu\text{m}$

Measurement Capability		
Measurement Time	< 10 seconds (excluding fiber prep)	< 10 seconds (excluding fiber prep)
Fiber Diameter	up to 400 $\mu\text{m}$	up to 1000 $\mu\text{m}$
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
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  $\mu\text{m}$  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 20/400  $\mu\text{m}$  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 $\mu\text{m}$ . Including optical unit, fiber handling bench, cables, software package; desktop computer; pair of Arden holders suitable for 250 $\mu\text{m}$ diameter coated fiber.
FGC-GS	Fiber Glass Geometry System for measurement of optical fibers with diameters up to 1000 $\mu\text{m}$ . Including optical unit, fiber handling bench, cables, software package; desktop computer; pair of Arden holders suitable for 400 $\mu\text{m}$ diameter coated fiber.
FG-H-250	Pair of Arden FGC fiber holders with 250 $\mu\text{m}$ V-groove, suitable for 250 $\mu\text{m}$ diameter coated fiber
FG-H-400	Pair of Arden FGC fiber holders with 400 $\mu\text{m}$ V-groove, suitable for 400 $\mu\text{m}$ diameter coated fiber
FG-H-600	Pair of Arden FGC fiber holders with 600 $\mu\text{m}$ V-groove, suitable for 600 $\mu\text{m}$ diameter coated fiber
FG-H-800	Pair of Arden FGC fiber holders with 800 $\mu\text{m}$ V-groove, suitable for 800 $\mu\text{m}$ diameter coated fiber
FG-H-1000	Pair of Arden FGC fiber holders with 1000 $\mu\text{m}$ V-groove, suitable for 1000 $\mu\text{m}$ diameter coated fiber
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

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