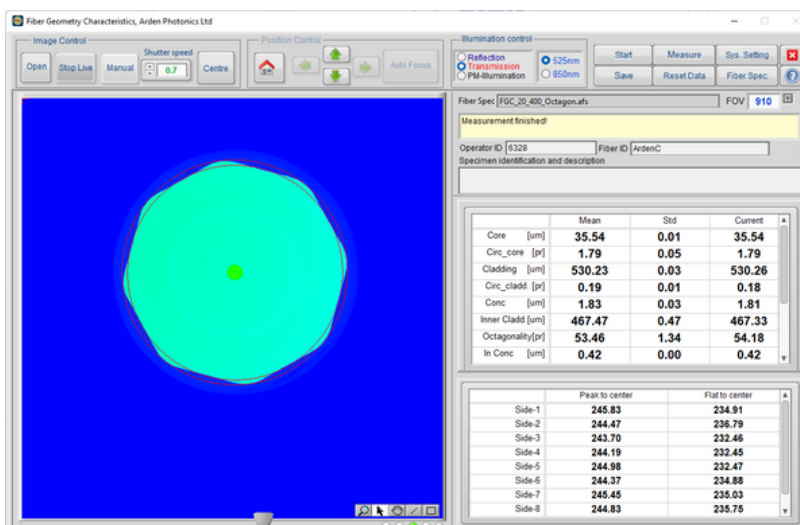


The FGC-G range is the complete solution for measuring the dimensions of standard and specialty fiber in both production and R&D environments. The FGC-G comes in 2 different models:

- FGC-GT - fiber glass geometry for fibers up to 500  $\mu\text{m}$  diameter
- FGC-GS - fiber glass geometry for fibers up to 800  $\mu\text{m}$  diameter

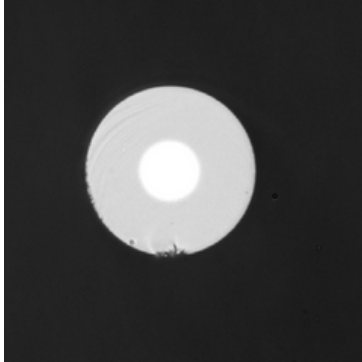
### Features & Benefits

- 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

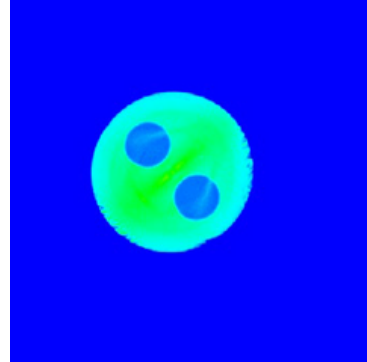


FGC-G software user interface main screen

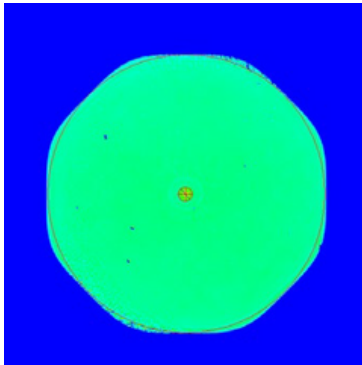
### Fiber Gallery



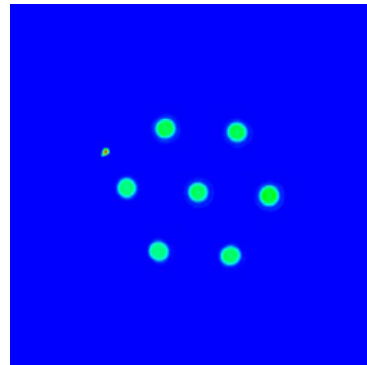
<<  
**Standard**



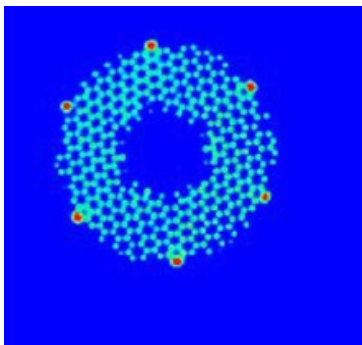
<<  
**PM**



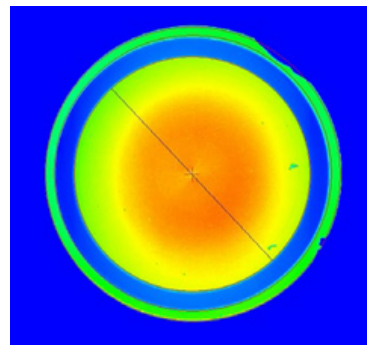
<<  
**Octagonal**



<<  
**Multicore**



<<  
**Micro-structured**



<<  
**Dual Clad**



# FGC-G

## Fiber Glass Geometry Measurement System

### Technical Specification

Optical	FGC-GT*	FGC-GS**
Max Field of View	600 $\mu\text{m}$	900 $\mu\text{m}$
Fiber Illumination - Reflection	Darkfield illumination, 850 nm LED***	Darkfield illumination, 525 nm LED***
Fiber Illumination - Transmission	Multiple LED array, 850 nm***	Multiple LED array, 525 nm***

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)	
Fiber Diameter	up to 500 $\mu\text{m}$	up to 800 $\mu\text{m}$
Special Fibers	Dual clad, Octagonal, PM, Multicore, PCF, etc.	

Physical	
Weight	11kg (with carry case 33kg)
Size of FGC unit	0.5 x 0.4 x 0.2 m
Size of fiber handling bench	0.5 x 0.5 x 0.1 m
Operating Temp	10 - 30°C
Computer Requirements	All FGC systems are supplied with a computer running up-to-date Windows OS
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 22°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 22°C.

\*\*\* May be fitted with dual wavelengths or other customised wavelengths



# FGC-G

## Fiber Glass Geometry Measurement System

### Ordering Information

Part number	Description
FGC-GT	Fiber Glass Geometry System for measurement of optical fibers with diameters up to 500 $\mu\text{m}$ . 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 800 $\mu\text{m}$ . 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
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-850	PM illuminator, 850 nm, for measuring dimensions of 125 and 80 $\mu\text{m}$ diameter PANDA fibers. Optional plug-in unit for all models of FGC.
FGC-PMI-525	PM illuminator, 525 nm, for measuring dimensions of 125 and 80 $\mu\text{m}$ diameter PANDA fibers. Optional plug-in unit for all models of FGC.

For North American sales enquiries, call **+1 (727) 478-2651** or email us on [sales@ardenphotonics.com](mailto:sales@ardenphotonics.com)

For Rest of World sales enquiries, call **+44 (0) 121 733 7721** or email us on [sales@ardenphotonics.com](mailto:sales@ardenphotonics.com)

Issued 18 January 2023

Manufactured by  
Arden Photonics Ltd

Arden Photonics Ltd  
Royston House, 267 Cranmore Boulevard,  
Shirley, Solihull, B90 4QT, UK  
+44 (0) 121 733 7721

Arden Photonics, LLC  
4500 140th Avenue North, Suite 180,  
Clearwater, FL 33762, USA  
+1 (727) 478 2651

[www.ardenphotonics.com](http://www.ardenphotonics.com)  
[enquiries@ardenphotonics.com](mailto:enquiries@ardenphotonics.com)