



# FGC-G

## Fiber Glass Geometry Measurement System



The FGC-G Fiber Glass Geometry Systems provide high-speed automated measurements of optical fiber end-face geometry, including core diameter, core non-circularity, cladding diameter, cladding non-circularity and core-to-cladding concentricity.

The FGC-G comes in 2 different models. The FGC-GT is optimized for measuring fibers of 125  $\mu\text{m}$  in diameter and can measure fibers up to 400  $\mu\text{m}$ . Typical applications are development and manufacturing of single and multimode telecom fibers, but it can also measure speciality fiber as well. The FGC-GS can measure fibers with diameters up to 1mm, and is optimized for measuring speciality fibers such as octagonal fibers, and dual-cladding fibers.



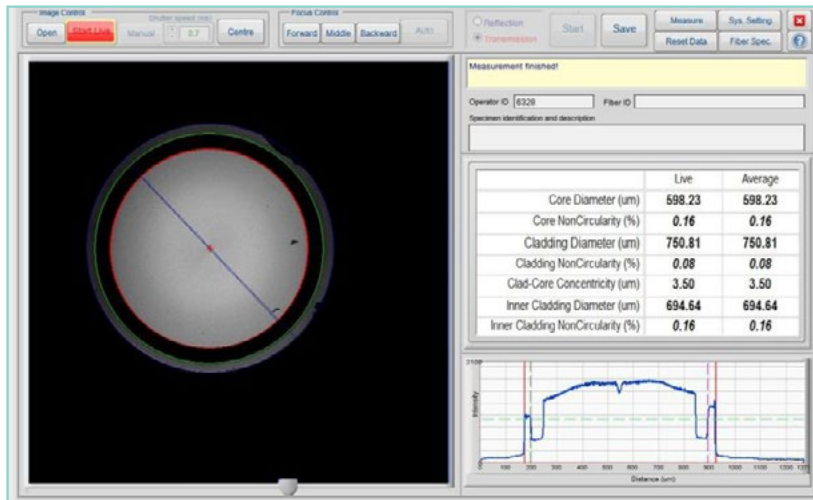
### Features & Benefits

- Can measure special fiber e.g. Dual-clad, octagonal, etc.
- Darkfield illumination gives clear view of the fiber endface
- Standards compliant – have confidence in its accuracy
- Compact, robust and reliable – means it is ready for production
- Consistent, repeatable fiber geometry measurements in seconds
- Traceable calibration
- Fiber handling including Arden and Fujikura holders
- Internal LED array for consistent and fully filled core launch conditions



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FGC-G software user interface main screen

### Technical Specification

Optical	FGC-GT*	FGC-GS**
Max Field Of View	600 µm	1000 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 400µm	up to 1000µm
Special Fibers	Dual clad, Octagonal, etc.	Dual clad, Octagonal, etc.

Physical		
Weight	11kg (with carry case 33kg)	11kg (with carry case 33kg)
Size	0.5 x 0.5 x 0.2	0.5 x 0.5 x 0.2
Operating Temp	0 – 50° C	0 – 50° C
Humidity	5%-95%, relative, non-condensing	5%-95%, relative, non-condensing

**Computer Requirements** All FGC systems are supplied with a desktop computer running up-to-date Windows operating system.

Data Interface	2 X USB 3.0 (USB B to USB A: 2m cable supplied)
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\* Repeatability is measured on the FGC-GT using a single 125 µm fiber without removing it from the unit, 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.



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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
FG-H-CUST	Pair of Arden FGC fiber holders with customer defined V-groove diameter

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