

HOLLOW SILICA Waveguide

HSW

Fibers

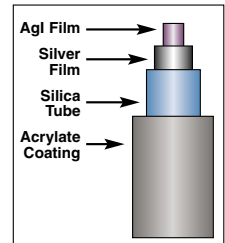
• IR Applications

Characteristics

- Wavelength Range 2.9µm past 10.6µm
- High Laser Damage Threshold: > 60W @ 10.6µm
- Strong and Flexible
- Non-Toxic: Sterilizable*
- Low Insertion Loss
- No End Reflection
- Transmission Optimized for CO₂ or Er:YAG Laser Wavelengths
- Custom Buffers Available

HWCA – CO₂ Hollow Waveguide with Acrylate Buffer

Description	ID (µm)	Glass OD (µm)	Buffer OD (µm)	Straight Loss (dB/m Max)	Bend Loss** (dB Max)
HWCA300750	300 ± 20	400 ± 15	750 ± 25	2.0	1.5
HWCA500850	500 ± 25	650 ± 20	850 ± 30	0.8	1.5
HWCA7501200	750 ± 30	950 ± 25	1200 ± 50	0.5	1.0
HWCA10001600	1000 ± 50	1300 ± 25	1600 ± 50	0.5	1.0

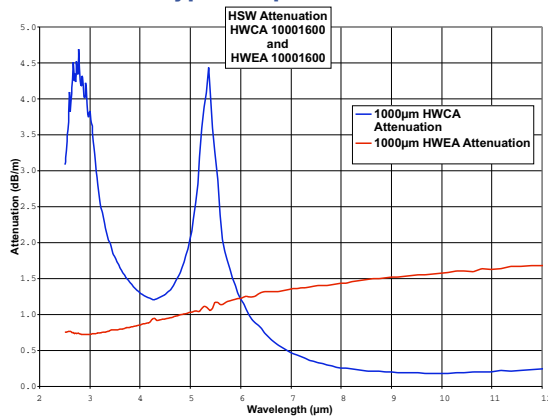


HWEA – Er:YAG Hollow Waveguide with Acrylate Buffer

Description	ID (µm)	Glass OD (µm)	Buffer OD (µm)	Straight Loss (dB/m Max)	Bend Loss** (dB Max)
HWEA300750	300 ± 20	400 ± 15	750 ± 25	2.0	2.0
HWEA500850	500 ± 25	650 ± 20	850 ± 30	1.5	2.0
HWEA7501200	750 ± 30	950 ± 25	1200 ± 50	1.0	1.5
HWEA10001600	1000 ± 50	1300 ± 25	1600 ± 50	1.0	1.5

** Bend loss in 360° 40cm diameter loop

HSW Typical Spectral Attenuation



Terminations Available

Poly-Lok™:

- Removable, reusable connectors, ideal for prototyping
- SMA (905), SMA (906), STII, and FC (STII and FC not available for 1000µm bore)
- Not for permanent installations

Permanent SMA (905), SMA (906), STII, and FC:

- Waveguide protrudes 1 to 2 mm from connector endface

* The end manufacturer is responsible for bio-compatibility and sterilization testing and validation studies.

- Flexible Capillary
- Multimode Optical Fiber
- Specialty Assemblies
- Micro-Components

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