

IR Applications

CHARACTERISTICS

Wavelength range 2.9µm past
10.6µm

High laser damage threshold: >
1000W @ 10.6µm

Strong and flexible

Non-toxic: sterilizable*

Low insertion loss

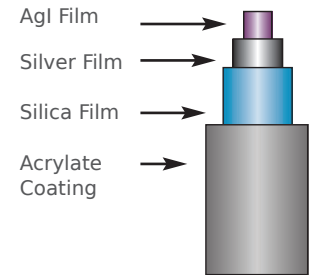
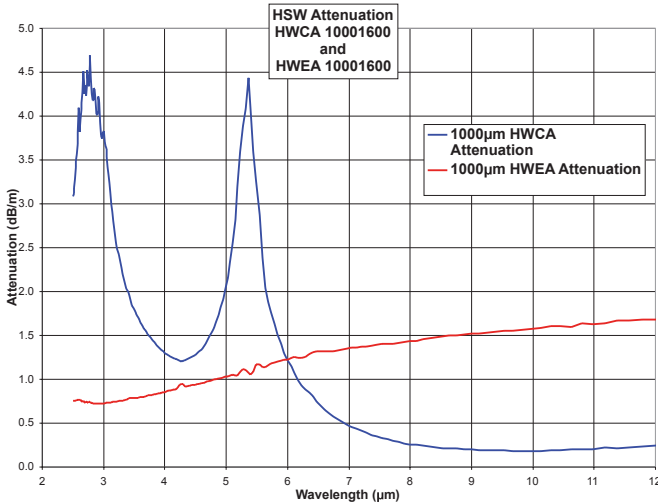
Polymicro HOLLOW SILICA Waveguide HSW

No end reflection

Transmission optimized for CO₂
or Er:YAG laser wavelengths

Custom buffers available

HSW Typical Spectral Attenuation



Specifications

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

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

** Bend loss in 360° 40cm diameter loop

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