

# AS... IR Taper Fibers

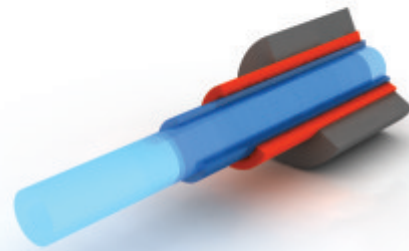
## Features

- Higher transmission than PCS-Fibers between 1500 nm and 2600 nm
- Broad useful spectral transmission range
- Specialty coatings available for high temperatures, high vacuum and harsh chemicals environments
- Biocompatible materials
- Sterilizable by ETO, steam, e-beam, gamma radiation
- Radiation resistant
- Laser damage resistant



## Fiber-Design

- Pure fused silica core (low OH-)
- Fluorine doped fused silica cladding
- Acrylate coating (-40°C to 85°C)
- Silicone resin coating (-40°C to 180°C)
- Polyimide coating (-190°C to 385°C)



## Properties

- Core/clad ratio: 1.1, 1.2, 1.4
- Numerical aperture:  $0.22 \pm 0.02$
- Operation wavelength range: 350 nm to 2600 nm
- Proof test level (bend method): 70 kpsi
- Bend radius: momentary 100 times the fiber radius long term  
600 times the fiber radius
- Laser damage threshold: > 5 J/mm<sup>2</sup> (Nd:YAG, 1ms pulse at 1060 nm)  
> 1.3 kW/mm<sup>2</sup> (Nd:YAG, cw at 1060 nm)

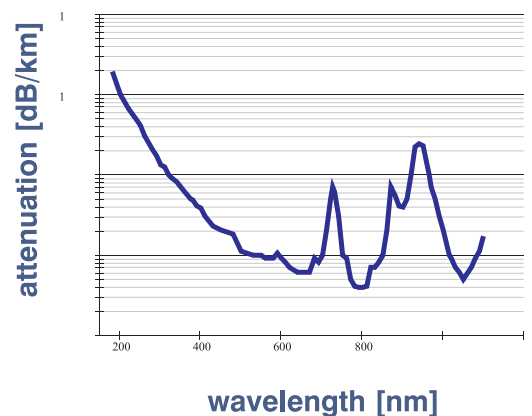
## Buffer

- Nylon (-40°C to 100°C)
- ETFE (-200°C to 150°C)
- Acrylate (-40°C to 85°C)

## Options

- Core/clad ratios 1.15, 1.30, 1.4 ... 2.5
- Numerical apertures 0.07 to 0.28
- Metal coating
- Fiber bundles
- Tapered fibers
- Connectors (SMA, FC/PC, ST, DIN)
- AS-Fiber cables
- high temperature acrylate -40°C to 200°C

## Spectral Attenuation AS...IR



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## NYLON BUFFERED FIBERS

(-40°C to 85°C)

### NOTE

For silicone coating  
replace A with S in  
product code.

Product code	Core (μm) ± 2%	Cladding(μm)±2%	Coating (μm) ± 5%	Coating Material	Buffer (μm) ± 5%
AS 100/140 IRAN	100	140	200	Acrylate	500
AS 200/220 IRAN	200	220	350	Acrylate	500
AS 200/280 IRAN	200	280	500	Acrylate	700
AS 300/330 IRAN	300	330	500	Acrylate	700
AS 400/440 IRAN	400	440	550	Acrylate	700
AS 600/660 IRAN	600	660	800	Acrylate	1000
AS 800/880 IRAN	800	880	1000	Acrylate	1200
AS 1000/1100 IRAN	1000	1100	1250	Acrylate	1500
AS 1500/1650 IRAN	1500	1650	1800	Acrylate	2000

## ETFE BUFFERED FIBERS

(-40°C to 150°C)

### NOTE

For acrylate coating  
replace S with A in  
product code.

Product code	Core (μm) ± 2%	Cladding(μm)±2%	Coating (μm) ± 5%	Coating Material	Buffer (μm) ± 5%
AS 100/140 IRSE	100	110	180	silicone	300
AS 200/220 IRSE	200	220	350	silicone	500
AS 200/280 IRSE	200	280	500	silicone	700
AS 300/330 IRSE	300	330	500	silicone	700
AS 400/440 IRSE	400	440	550	silicone	700
AS 600/660 IRSE	600	660	800	silicone	1000
AS 800/880 IRSE	800	880	1000	silicone	1200
AS 1000/1100 IRSE	1000	1100	1250	silicone	1500
AS 2000/2100 IRSE	2000	2100	2800	silicone	4000

## POLYIMIDE COATED FIBERS

(-190°C to 385°C)

Product code	Core (μm) ± 2%	Cladding (μm) ± 2%	Coating (μm) ± 3%
AS 100/140 IRPI	100	140	155
AS 200/220 IRPI	200	220	235
AS 200/280 IRPI	200	280	295
AS 300/330 IRPI	300	330	345
AS 400/440 IRPI	400	440	460
AS 600/660 IRPI	600	660	680

## BUNDLES FIBER SPECIFICATIONS

Product code	Core (μm) ± 2%	Cladding(μm)±2%	Coating (μm) ± 3%	Coating Material	Wavelength Range nm
AS 50/70 IRVV	50	70		Wet coating	350 to 2600
AS 50/70 IRPI	50	70	78	Polyimide	350 to 2600
AS 58/70 IRVV	58	70		Wet coating	350 to 1500
AS 58/70 IRPI	58	70	78	Polyimide	350 to 1500
AS 100/110 IRVV	100	110		Wet coating	350 to 1500
AS 100/110 IRPI	100	110	120	Polyimide	350 to 1500
AS 100/120 IRVV	100	120		Wet coating	350 to 2600
AS 100/120 IRPI	100	120	120	Polyimide	350 to 2600
AS 125/150 IRPI	125	150	160	Polyimide	350 to 2600
AS 150/165 IRPI	150	165	180	Polyimide	350 to 1800
AS 200/220 IRPI	200	220	235	Polyimide	350 to 2600

Other specifications upon request.

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