

Silica-silica fibers UV-Visible

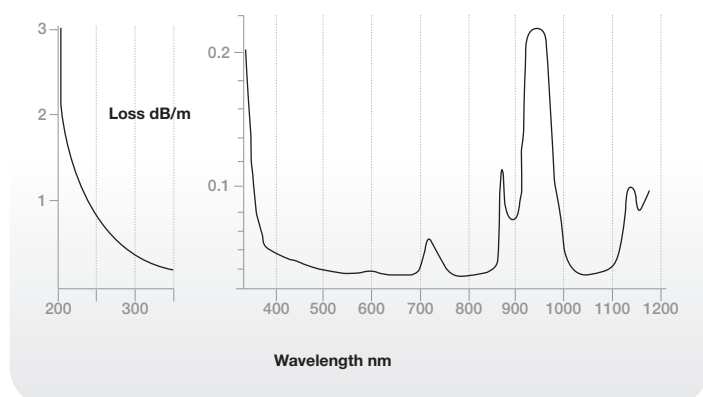
HPSUV Series



OXFORD ELECTRONICS

Manufacture and supply of specialised optical fibers

- Wide spectrum-UV and visible
- High power transmission
- Radiation resistant



These multimode step-index silica-silica fibers have a pure silica core and doped silica cladding. They will transmit light from 180 to 1200 nm. For general use an acrylate coating is recommended. Acrylate coated fibers are available in sizes from 200 μm to 1.0 mm core diameter. For optical fiber light guides or higher temperatures, polyimide coated fibers are available in core diameters up to 300 μm . They have a very low fluorescence and are recommended for spectroscopy. These fibers are suitable for use across a wide wavelength range. They can be used for high power transmission and have good radiation resistance.

These fibers are available as cables or patchcords.

Fiber specification

Fiber type

Step-index multimode

Core material

High purity synthetic silica

Cladding material

Doped silica

Numerical aperture

0.22 \pm 0.02

Minimum bend radius (short term)

100 times fiber radius

Minimum bend radius (long term)

500 times fiber radius

Typical spot values of attenuation

248 nm (KrF laser) <1.2dB/m, 308 nm (XeCl laser) <0.26dB/m

HPSUV Series acrylate coated

	HPSUV 200P	HPSUV 400P	HPSUV 600P	HPSUV 1000P
Core diameter μm	200	400	600	1000
Cladding diameter μm	212	424	636	1060
Coating diameter μm	360	700	1000	1600

The standard core/cladding ratio for HPSUV fibers is 1:1.06. Other core cladding ratios are available to special order.

Operating temperature

-40°C to +85°C

Maximum intensity of transmitted power*

CW up to 100 kW/cm².

For pulsed lasers (<1 μs) 500kW/cm

*These figures refer to threshold of damage and assume a circular spot with linear power distribution. Many real lasers are less than ideal and so these figures must be used with caution. Our technical sales department will be pleased to advise on selection of fibers for high-powered lasers.

HPSUV Series polyimide coated

	HPSUV 95I	HPSUV 200I	HPSUV 300I
Core diameter μm	95	200	300
Cladding diameter μm	100	212	318
Coating diameter μm	105	225	335

The standard core/cladding ratio for HPSUVI fibers is 1:1.06. Other core cladding ratios are available to special order. The HPSUV 95I is recommended for fiber bundles (light guides) as it allows small bend radii to be used.

Operating temperature: -190°C to +350°C

Step-index silica-silica fibers are also available with CuBALL metal coating for high temperature use.