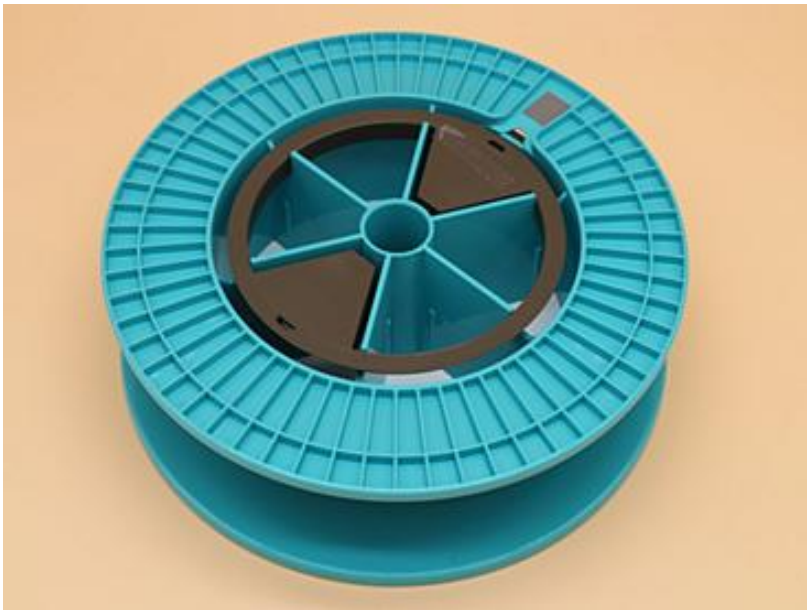
SM450 Short-Wavelength Single-Mode RGB Fiber



Product Description

Single Mode Fiber (SMF) refers to an optical fiber that supports only one transmission mode at a specific wavelength (with two degenerate polarization modes allowed). Single mode fibers typically have a core diameter in the range of 10 microns, with a very small refractive index difference between the core and cladding (<1%). Due to the characteristics of single-mode fibers, such as long transmission distance, high bandwidth, low transmission loss, no intermodal dispersion, and strong reliability, they

can be used in outdoor long-distance data transmission, fiber optic communications, fiber optic sensing, and other fields. SM450 fiber, when fused with a coupler, has a very low splice loss and is suitable for device connector manufacturing.

Product features

Excellent consistency and uniformity 、 Extremely strong mechanical stability and reliability 、Excellent geometric control 、High core refractive index 、High coupling efficiency 、High numerical aperture

Part Number

MP-SM-450-2.8/125

Application area

Low-loss tapered splitters 、 Optical fiber couplers and DWDM (Dense Wavelength Division Multiplexing) devices 、 Short-wavelength lasers and LED light sources 、Sensors and gyroscope specifications

Core parameters

Operating Wavelength Range	Cladding Diameter	Core Diameter
488-633nm	125±0.5um	2.8-4.1um

General Parameters

Parameters

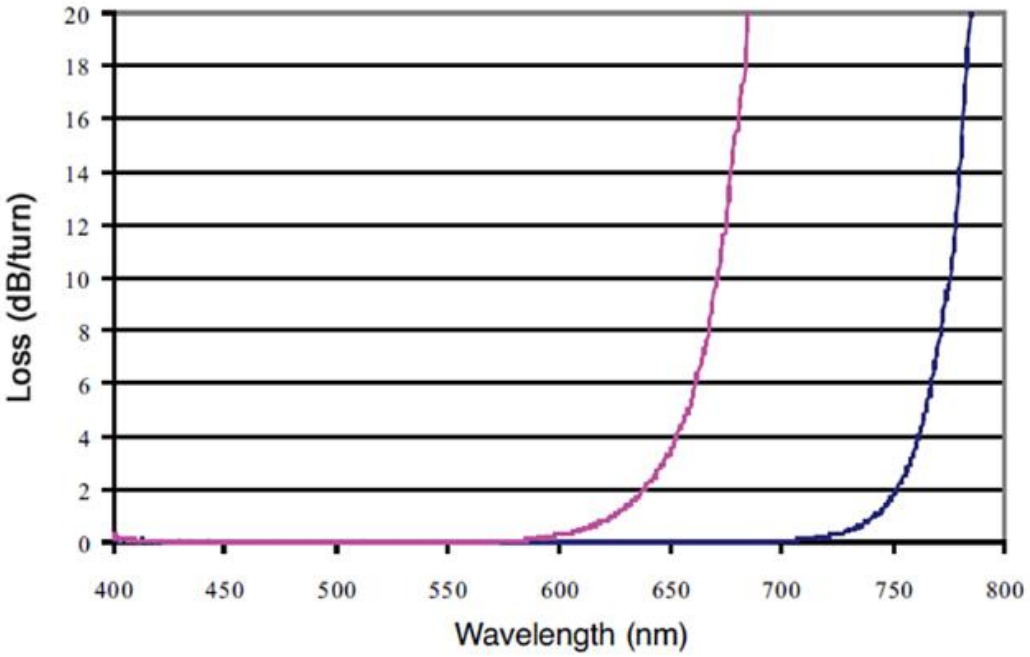
SM450 short wavelength SM RGB Fiber

Operating wavelength range	488-633nm
Core numerical aperture	0. 14
Mode field diameter	4. 0um @ 488nm
Cutoff wavelength	400±nm
Core attenuation	50db/ km @ 488 nm
Cladding diameter	125 ±0. 5μm
Core diameter	2. 8-4. 1um
Coating diameter	245 ±10μm
Core/cladding offset	⩽0. 3μm
Operating temperature range	-60 to 85°C
Strength test level	100kpi or 200kpi
Bend loss	< 0. 05(dB/ turn) (20 mm O. D.; 850 nm)
Core refractive index	1. 463 @ 651 nm
Standard length	50 m, 100m, 1 km, 2, km, 5 km
Dispersion	-132(ps/ nm/ km) @780 nm -99(ps/ nm/ km) @850 nm

SM600 630nm SM Fiber SMF

Operating wavelength range	>520nm
Core numerical aperture	0. 13
Mode field diameter	4.0 ± 0.4um @630nm 3.5 ± 0.5um @ 532nm
Cutoff wavelength	570±50nm
Core attenuation	8db/km @ 532nm 6db/km @630 nm
Cladding diameter	125 ±0. 5μm
Core diameter	4.0um
Coating diameter	245 ±10μm
Core/cladding offset	⩽0. 3μm
Operating temperature range	-60 to 85°C
Strength test level	100kpi or 200kpi
Bend loss	< 0. 05(dB/ turn) (20 mm O. D.; 850 nm)
Core refractive index	1. 463 @ 651 nm
Standard length	500m, 1 km, 2, km, 5 km
Dispersion	-160(ps/nm/km) @532nm -135(ps/nm/km) @633nm

Bending test curve



SM600 fiber bend loss at 20 mm(Blue curve) and 50 mm diameters（Pink curve）

Ordering info

MP-SM-450-2.8/125

Product Description:

Operating Wavelength Range: 488 - 633nm

Cutoff Wavelength: 350 - 470nm

Numerical Aperture: 0.10 - 0.13

Mode Field Diameter: 3.0 - 4.1μm @488nm

Attenuation: ≤50 dB/km @488nm