Verrillon®

Ultra-High Solarization Resistance Optical Fibers - VSR Series

Verrillon® VSR Series of Ultra-High Solarization-Resistant fiber is designed to transmit light in the Deep UV (DUV) region of the spectrum where standard silica glass suffers significant darkening with attenuation values higher than 2000 dB/km, which is unacceptable for any application in DUV region.

Verrillon's Ultra-High Solarization-Resistant Fiber performs long-term with exceptional throughput in Deep UV range without solarization effects. This fiber offers many possibilities in a broad range of applications in DUV and radiation environments. The UV darkening resistance is permanent and Verrillon's VSR fiber does not degrade over time.

Features

- High Transmission Performance in Deep UV Spectrum
- Stable Performance in Long-Term Deep UV Exposure
- High Energy UV irradiation resistance
- Permanent solarization resistance

Applications

- UV Photolithography
- Medical UV surgical laser delivery
- UV Light guide, UV Curing
- Spectroscopy
- UV Sensing /Monitoring
- Semiconductor manufacturing equipment
- EB Curing /Printing /Processing
- Fluorescent sensing under radiation

Specifications

	ULTRA-HIGH SOLARIZATION RESISTANCE FIBERS	
PART NO.	M100110CP140SR22-1	M400440CP465SR22-1
Description	100/110 Ultra-High Solarization-Resistant Step-Index Multimode fiber designed for Low-Loss Deep UV (DUV) applications.	400/440 Ultra-High Solarization-Resistant Step-Index Multimode fiber designed for Low-Loss Deep UV (DUV) applications.
PARAMETER		
Material		
Core	Pure Silica	Pure Silica
Cladding	F-doped Silica	F-doped Silica
Coating	Carbon / Polyimide	Carbon / Polyimide
Geometry		
Core Diameter (µm)	100 ± 3	400 ± 8
Clad Diameter (µm)	110 ± 3	440 ± 9
Core/Clad Offset (µm)	≤ 3.0	≤ 3.0
Coat Diameter (µm)	140 ± 5	465 ± 7
Polyimide Coating Concentricity (%)	≥ 80%	≥ 80%
Optical		
NA (nominal)	0.22	0.22
Operating Wavelength (nm)	180 nm - 850 nm	180 nm - 850 nm
Mechanical		
Prooftest (kpsi)	≥ 100	≥ 100
Operating Temperature (°C)	-65 to +300	-65 to +300