

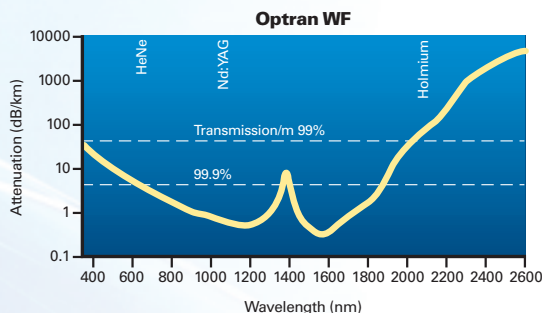
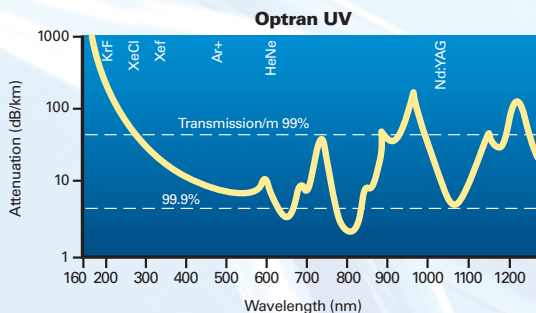
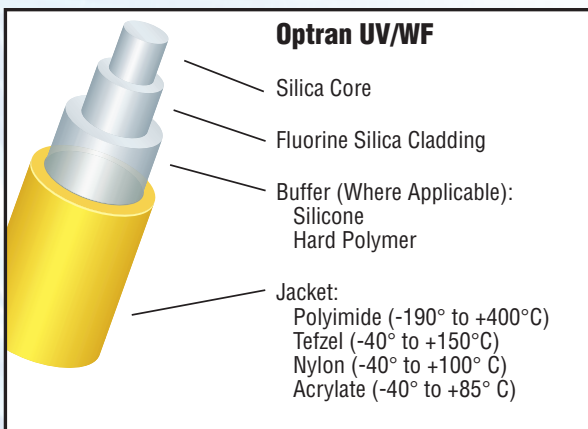
# CeramOptec®

Innovative Fiber Optics...Every Step of the Way™



CeramOptec's high quality Optran UV and Optran WF fiber exhibits impressive performance and transmission from the deep UV to the IR. With exceptional radiation resistance and broad temperature capability, Optran UV and Optran WF are ideal for applications including spectroscopy, Thomson scattering, and medical diagnostics. We offer a choice of several jacket types and sizes—as well as custom-designed products and sizes to meet your specifications. For instance, our new Optran WF with a hard polymer buffer features *Cleave N Connect™* technology to eliminate messy silicone stripping.

## Fiber Design



## Applications

### ■ Industrial/Scientific

- Spectroscopy
- Sensors
- UV photolithography
- Laser welding/soldering/marking
- Laser delivery
- Nuclear plasma diagnostics

- Analytical instruments
- Laser diode pigtail
- Pyrometry
- Semiconductor capital equipment
- Thomson scattering

### ■ Medical

- Medical diagnostics
- Laser delivery

- Photodynamic therapy

**Optran UV & Optran WF Standard NA (0.22) Sizes**

<b>Product Code</b>	<b>∅ Core (µm) ± 2%</b>	<b>∅ Cladding (µm) ± 2%</b>	<b>∅ Buffer (µm) ± 3%</b>	<b>∅ Jacket (µm) ± 5%</b>
	Pure Silica	Fluorine Doped Silica	Silicone	
<b>Acrylate</b>				<b>Acrylate</b>
50/125 A	50	125		250
100/140 A	100	140		250
105/125 A	105	125		250*
200/220 A	200	220		320
300/330 A	300	330		410
400/440 A	400	440		550
500/550 A	500	550		650
600/660 A	600	660		770
<b>Nylon</b>				<b>Nylon</b>
100/140 N	100	140	240	310
200/220 N	200	220	320	420
300/330 N	300	330	430	530
400/440 N	400	440	540	640
500/550 N	500	550	650	750
600/660 N	600	660	760	860
800/880 N	800	880	980	1200
1000/1100 N	1000	1100	1200	1600
1250/1325 N	1250	1325	1500	1800
1500/1600 N	1500	1600	1800	2200
1700/1800 N	1700	1800	2000	2400
<b>Polyimide</b>				<b>Polyimide</b>
50/125 P	50	125		150
100/110 P	100	110		125*
200/220 P	200	220		245
300/330 P	300	330		355
400/440 P	400	440		470
600/660 P	600	660		710
<b>Tefzel</b>				<b>Tefzel</b>
200/220 T	200	220	320	500
300/330 T	300	330	480	720
400/440 T	400	440	560	1000
500/550 T	500	550	650	1100
600/660 T	600	660	810	1200
800/880 T	800	880	980	1200
1000/1100 T	1000	1100	1300	1600
1250/1325 T	1250	1325	1525	2100
1500/1600 T	1500	1600	1800	2400
1700/1800 T	1700	1800	1900	2600

Note: Please prefix product code with "UV" or "WF" according to your wavelength.  
 Low NA: 0.12 ± 0.02 (Suffix Product Code with "12")  
 High NA – Optran Plus™ 0.28: 0.28 ± 0.02 (Suffix Product Code with "28")  
 High NA – Optran Plus™ 0.30: 0.30 ± 0.02 (Suffix Product Code with "30")  
 Ex: UV 1250/1325 T 28

## Features

- Broad UV / VIS / NIR spectral range:
  - Optran UV: 160 – 1200 nm
  - Optran WF: 350 – 2500 nm
- High laser damage resistance
- Broad temperature range (-190° to +400°C)
- High core to clad ratio
- Large core diameters to 1700 µm
- Biocompatible materials
- Radiation resistance: 10<sup>9</sup> rad. total
- Sterilizable by ETO and other methods
- Manufactured at GMP and ISO 9001 compliant facility
- Specialty coatings available for high temperatures, high vacuum, and harsh chemicals
- All dielectric, non-magnetic construction

---

## Properties

- Step index profile
- Pure silica core
- Available NAs:
  - Low NA – 0.12 ± 0.02
  - Standard NA – 0.22 ± 0.02
  - High NA: Optran Plus™ 0.28 – 0.28 ± 0.02
  - High NA: Optran Plus™ 0.30 – 0.30 ± 0.02
- Standard proof test: 70 kpsi
- Core/clad ratios available: 1:1.06, 1:1.1, 1:1.15, 1:1.2, 1:1.25, 1:1.4
- Minimum bend radius:
  - 100 x clad radius (momentary)
  - 300 x clad radius (long term)
- Laser damage threshold:
  - XeCl 18.0 mJ/mm<sup>2</sup> (200ns pulse) at 308 nm
  - XeCl 8.0 mJ/mm<sup>2</sup> (20ns pulse) at 308 nm
  - Nd:YAG 5.4 J/mm<sup>2</sup> (1 ms pulse) at 1060 nm
  - Nd:YAG 1.3 kW/mm<sup>2</sup> (CW) at 1060 nm

---

## Notes:

Custom sizes are available upon request.

\*Core/Clad ratio may not support transmission for long wavelengths.

Higher NAs available (0.37 to 0.53)—see Optran Ultra™ data sheet for more information.

NA is measured at the 95% intensity angle.

CeramOptec strives to ensure the accuracy of all information provided; however, we imply no warranties and disclaim any liability in connection with the use of this information.

Tefzel® is a registered DuPont product.



**Please contact our Sales Engineering representatives:**

**North America**

CeramOptec Industries, Inc.  
515A Shaker Road; East Longmeadow, MA 01028  
Tel: 800-934-2377  
413-525-0600  
Fax: 413-525-1112  
Email: salesengineering@ceramoptec.com

**West Coast Office**

Tel: 408-362-0100  
Fax: 408-629-1657  
Email: salesengineering@ceramoptec.com

**Europe**

CeramOptec GmbH  
Siemensstr. 44; 53121 Bonn, Germany  
Tel: +49 (0) 228-979670  
Fax: +49 (0) 228-9796799  
Email: info@ceramoptec.de

***Innovative Fiber Optics...Every Step of the Way***

CeramOptec was founded in 1986 and today is a global leader in the production of stock and custom silica / silica, plastic-clad silica, and hard polymer-clad silica optical fibers; fused capillary tubing; DPSS lasers; diode modules; and low loss bundles and assemblies for UV, VIS, and IR transmission, medical laser delivery, sensors, plasma fusion, and spectroscopy.

With several facilities worldwide, we are able to provide our customers with local, prompt, and reliable service and products. By maintaining complete control over the entire manufacturing process—from preform manufacturing to finished fiber product—we are able to provide the highest quality control, custom solutions, and competitive pricing to our customers.

Please visit <http://www.ceramoptec.com> for more information.

CeramOptec is a subsidiary of biolitec™ AG.

Please visit <http://www.biolitec.com> for more information.