FIBER OPTIC BUNDLES
160 to 2500 nm

CeramOptec®

Innovative Fiber Optics…Every Step of the Way™

CeramOptec ensures the highest quality and best transmission for fiber optic bundles, while working within the boundaries of your application. In order to optimize your bundle, we take several parameters into consideration: packing efficiency, fiber area efficiency, Numerical Aperture optimization, fiber transmission, reflections, and an error factor (which includes numerical aperture discrepancies). Our high quality fiber optic bundles can be made with any fiber and your choice of several configuration and construction possibilities. In addition, a number of connectors, including all standard connectors—or custom ferrules, machined in-house—are available.

In addition, CeramOptec's Optran® UVNS (UV Non-Solarizing) fibers can be fused at the ends to eliminate inter-fiber spaces—while maintaining the fibers' NA and increasing transmission by 50%. Please see our PowerLightGuide™ Fused-End Bundle data sheet for more information about our non-solarizing bundles for UV applications.

Applications

- Spectroscopy
- Sensors
- UV photolithography
- Particle detection
- Laser welding/soldering/marking
- Laser delivery
- Raman scattering
- Monitoring
- Smoke detection
- Pyrometry
- Nuclear plasma diagnostics
- Thomson scattering
- Quality control and inspection systems
- Photodynamic therapy
- Fluorescence excitation
- Analytical instruments
- Scanning
- Colorimetry
- Laser diode pigtailing
- Chemical analysis
- Semiconductor capital equipment
- Microscope illumination
- Streak cameras
- Remote illumination
- Reflective sensors

Bundle Construction

- Random
- Scrambled
- Mapped
- Special Coherent Bundles Available

Bundle Configuration

- Single
- Bifurcated
- Trifurcated
- Multi-Legged

Bundle Active Area Geometry

- Round
- Half Round
- Square
- Rectangle
- Line
- Ring
- Segmented Ring

Features

- Broad temperature range: -190˚ to +1500˚C
- Vacuum compatibility
- Variety of NAs available
- Radiation resistance
- Broadest wavelength range available
- Manufactured at GMP and ISO 9001 compliant facility
- Resistant to magnetic radiation
- Highest fiber efficiencies (best packing factor)
- Broadest line of fiber types
- All fiber production and assembly work completed in-house

Fiber Types (See individual data sheets for more information.)

- Optran UV / WF – All Silica Fibers
  - 160 to 2500 nm
  - Available NAs:
    - Low NA – 0.12 ± 0.02
    - Standard NA – 0.22 ± 0.02
    - Optran Plus™ 0.28 – 0.28 ± 0.02
    - Optran Plus™ 0.30 – 0.30 ± 0.02
    - Optran Ultra™ 0.37 (Vis / IR) – 0.37 ± 0.02
    - Optran Ultra™ 0.44 (Vis / IR) – 0.44 ± 0.02
    - Optran Ultra™ 0.53 (Vis / IR) – 0.53 ± 0.02
  - Temperature (configuration dependent): –190°C to +400˚C (-310˚F to +752˚F)
  - Vacuum compatible
- Optran PUV / PWF – Plastic Clad Silica
  - 200 to 2400 nm
  - NA 0.40 ± 0.02 (2 meters) or 0.30 ± 0.02 (greater than 40 meters)
- Optran HUV / HWF – Hard Polymer Clad Silica Fibers
  - 350 – 2200 nm
  - NA 0.37 or 0.48 ± 0.02
- Borosilicate – Soft Glass
  - 450 – 1600 nm
  - NA 0.55 or 0.66 ± 0.02
  - Temperature: -45˚C to +275˚C (-49˚F to 527˚F)

Jacketing Options

PVC Simplex – up to +80˚C (176˚F)

Black PVC Covered Galvanized Steel Monocoil – up to 105˚C (221˚F)

Non-Magnetic Stainless Steel Interlock – up to 350˚C (662˚F)

Others available upon request

Notes:

All bundles and assemblies are custom designed to meet your specifications. All standard connectors (SMA 905, SMA 906, ST, FC) are available—or custom ferrules, machined in-house to your specifications.

Refer to individual fiber data sheets for more information and to determine the best fiber for your application.

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.

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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.

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