

# 0.39 NA TECS™ Hard-Clad, Step-Index, Multimode Fiber

### **Description**

Thorlabs' 0.39NA TECS<sup>TM</sup> hard-clad, multimode, step-index fibers feature increased fiber strength and reduced static fatigue in humid environments. The high core-clad bonding prevents pistoning and provides more stable crimp-and-cleave or epoxy terminations.

### **Specifications**

| 0.39 NA TECS™ Hard Cladding, Step-Index, Multimode Fiber |  |  |  |  |
|--|--|--|--|--|
| Core / Cladding  | Pure Silica / TECS <sup>TM</sup> Hard Cladding |  |  |  |
| Coating  | Tefzel   |  |  |  |
| Operating Temperature (Tefzel Coating)                   | -65 to 135 °C                                  |  |  |  |
| Numerical Aperture (NA)                                  | 0.39   |  |  |  |



#### Visible to Near-IR Transmission (Low OH)

|           | Core                  | Clad                 | Coating           | Max Power<br>Capability |         | Max<br>Attenuation | Bend Radius<br>Short Term/ |
|-----------|-----------------------|----------------------|-------------------|-------------------------|---------|--------------------|----------------------------|
| Item #    | Diameter              | Diameter             | Diameter          | Pulsed                  | CW      | @ 808 nm           | Long Term                  |
| FT200EMT  | $200\pm5~\mu m$       | $225\pm5~\mu m$      | $500\pm30~\mu m$  | 1.0 MW                  | 0.2 kW  | 10 dB/km           | 21 mm / 42 mm              |
| FT300EMT  | 300 ± 6 μm            | 325 ± 10 µm          | 650 ± 30 µm       | 2.3 MW                  | 0.5 kW  | 10 dB/km           | 32 mm / 64 mm              |
| FT400EMT  | $400 \pm 8 \mu m$     | 425 $\pm$ 10 $\mu$ m | $730\pm30~\mu m$  | 4.0 MW                  | 0.8 kW  | 10 dB/km           | 43 mm / 86 mm              |
| FT600EMT  | $600\pm10~\mu m$      | $630\pm10~\mu m$     | $1040\pm30~\mu m$ | 9.0 MW                  | 1.8 kW  | 10 dB/km           | 48 mm / 96 mm              |
| FT800EMT  | $800 \pm 10 \ \mu m$  | $830\pm10~\mu m$     | $1040\pm30~\mu m$ | 16 MW                   | 3.2 kW  | 10 dB/km           | 55 mm / 110 mm             |
| FT1000EMT | $1000 \pm 15 \ \mu m$ | $1035\pm15~\mu m$    | $1400\pm50~\mu m$ | 25.1 MW                 | 5.0 kW  | 10 dB/km           | 69 mm / 138 mm             |
| FT1500EMT | $1500\pm30~\mu m$     | $1550\pm31~\mu m$    | 2000 ± 100 μm     | 56.6 MW                 | 11.3 kW | 18 dB/km           | 79 mm / 158 mm             |

#### UV to Visible Transmission (High OH)

|           | Core                  | Clad                 | Coating                | Max Po<br>Capab |         | Max<br>Attenuation | Bend Radius<br>Short Term/ |
|-----------|-----------------------|----------------------|------------------------|-----------------|---------|--------------------|----------------------------|
| Item #    | Diameter              | Diameter             | Diameter               | Pulsed          | cw      | @ 808 nm           | Long Term                  |
| FT200UMT  | $200\pm5~\mu m$       | $225\pm5~\mu m$      | $500\pm30~\mu m$       | 1.0 MW          | 0.2 kW  | 14 dB/km           | 21 mm / 42 mm              |
| FT300UMT  | 300 ± 6 µm            | 325 ± 10 µm          | 650 ± 30 µm            | 2.3 MW          | 0.5 kW  | 14 dB/km           | 32 mm / 64 mm              |
| FT400UMT  | $400\pm8~\mu m$       | 425 $\pm$ 10 $\mu$ m | $730\pm30~\mu m$       | 4.0 MW          | 0.8 kW  | 14 dB/km           | 43 mm / 86 mm              |
| FT600UMT  | $600\pm10~\mu m$      | $630\pm10~\mu m$     | 1040 ± 30 μm           | 9.0 MW          | 1.8 kW  | 12 dB/km           | 48 mm / 96 mm              |
| FT800UMT  | $800\pm10~\mu m$      | $830\pm10~\mu m$     | 1040 ± 30 μm           | 16 MW           | 3.2 kW  | 12 dB/km           | 55 mm / 110 mm             |
| FT1000UMT | $1000 \pm 15 \ \mu m$ | $1035\pm15~\mu m$    | $1400\pm50~\mu m$      | 25.1 MW         | 5.0 kW  | 12 dB/km           | 69 mm / 138 mm             |
| FT1500UMT | $1500\pm30~\mu m$     | $1550\pm31~\mu m$    | $2000 \pm 100 \ \mu m$ | 56.6 MW         | 11.3 kW | 18 dB/km           | 79 mm / 158 mm             |



## Specifications Cont.

| Item #    | Stripping<br>Tool |
|-----------|-------------------|
| FT200EMT  | T12S21            |
| FT300EMT  | T16S31            |
| FT400EMT  | T21S31            |
| FT600EMT  | T28S46            |
| FT800EMT  | M37S46            |
| FT1000EMT | M44S63            |
| FT1500EMT | M63S86            |

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|-----------|-------------------|
| FT200UMT  | T12S21            |
| FT300UMT  | T16S31            |
| FT400UMT  | T21S31            |
| FT600UMT  | T28S46            |
| FT800UMT  | M37S46            |
| FT1000UMT | M44S63            |
| FT1500UMT | M63S86            |
|           |                   |

### **Attenuation Curves**

**Typical Multimode Fiber Attenuation** 

