



# DCF-YB-6/128P-14-FA

## Yb-doped fiber for pulsed lasers

This phosphosilicate fiber is ideal as a gain medium for lower power amplifiers or the pre-amplifier stage and is mainly used in a MOPA configuration of a pulsed fiber laser. On top of all the benefits found in a phosphosilicate fiber (high saturation energy, photodarkening-free performance and high absorption), this fiber is singlemode operation and very low splice loss when matching with standard fibers such as HI 1060.

### Features & Benefits

- Single-mode operation and low splice loss with passive matching fibers
- Photodarkening-free – ensures stable long-term operation
- Wide, flat absorption from 910 nm to 970 nm – reduces pump cooling requirements and allows 940-960 nm pumping

### Applications

- Pulsed fiber lasers: gain media in preamplifiers or low power amplifiers
- Material processing: laser marking, laser engraving, micromachining and welding

### Related Products

- DCF-UN-6/125-14  
Matched double-clad fiber
- HI 1060  
Industry-standard optical fiber

### Specifications

#### Optical

|                                     |              |
|-------------------------------------|--------------|
| Cladding Absorption @ 915 nm (dB/m) | 1.45 ± 0.15  |
| Cladding Absorption @ 974 nm (dB/m) | Typ. >4.5    |
| Numerical Aperture - Cladding       | Min 0.45     |
| Numerical Aperture - Core           | 0.135 ± 0.01 |
| V-Number @1070nm                    | ≤ 2.405      |

#### Geometrical & Mechanical

|                                        |          |
|----------------------------------------|----------|
| Cladding diameter (µm)                 | 128 ± 3  |
| Cladding geometry                      | Oct.     |
| Coating Diameter (µm)                  | 260 ± 20 |
| Core Diameter (µm)                     | 6 ± 0.5  |
| Core/Cladding Concentricity Error (µm) | ≤ 1.5    |
| Proof Test (kpsi)                      | ≤ 100    |

#### Environmental

|                          |            |
|--------------------------|------------|
| Storage Temperature (°C) | -40 to +85 |
|--------------------------|------------|