

# EyeSafe Thulium-Doped SM Double Clad Fiber (Preform) with Pedestal

## Description:

ÚFE double-clad thulium-doped optical fiber with non-circular inner cladding is designed specifically for applications using pumping in the fiber cladding. The fiber features very high concentration of thulium ions and high conversion efficiency of pumping radiation, low concentration of hydroxyl ions and background losses and low numerical aperture of the core.

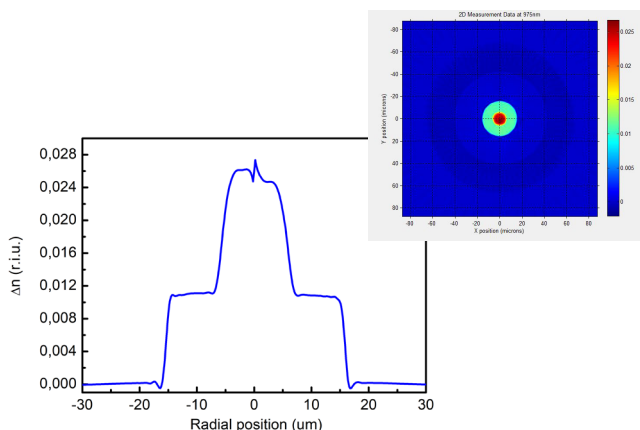
## Features:

- High thulium concentration and non-circular cladding – high cladding absorption to realize short fiber lengths to reduce detrimental non-linear effects
- High slope efficiency (65 %) – efficient utilization of the pump power at 792 nm
- Pedestal design – low NA of the core

## Optical specifications DC-TDF-12/135:

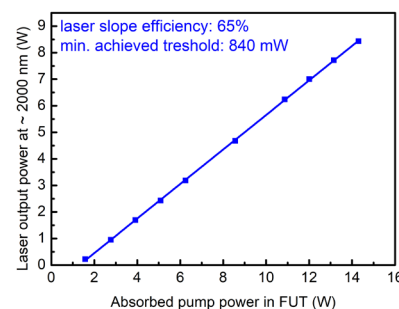
- Single-mode operation: beyond 1800 nm
- Operating wavelength: 1900-2100 nm
- Numerical aperture of the core: 0.2
- Cladding Absorption: 16 dB/m at 790 nm
- Concentration of thulium ions ~ 17000 ppm
- Fluorescence lifetime ( $^3F_4 - ^3H_6$ ): 604  $\mu$ s
- Fluorescence lifetime ( $^3H_4 - ^3H_6$ ): 20.6  $\mu$ s

## Refractive index fiber profile:

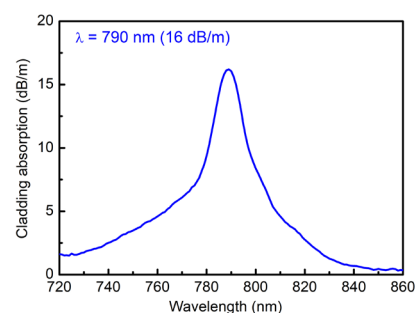


## Applications:

- Femtoseconds fiber lasers
- Broadband light (ASE) sources
- High-power, CW fiber lasers and amplifiers



## Cladding absorption band around 790 nm:



## Geometric and mechanical specifications:

- Non-circular structure
- Core diameter: 12  $\mu$ m
- Cladding diameter (flat to flat):  $135 \pm 2$   $\mu$ m
- Coating diameter:  $260 \pm 10$   $\mu$ m
- Fluoroacrylate coating for greater fiber durability in extreme environmental operating & storage conditions

