

EyeSafe Thulium-Doped SM Double Clad Fiber (Preform)

Description:

ÚFE double-clad thulium-doped optical fiber 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 low background losses.

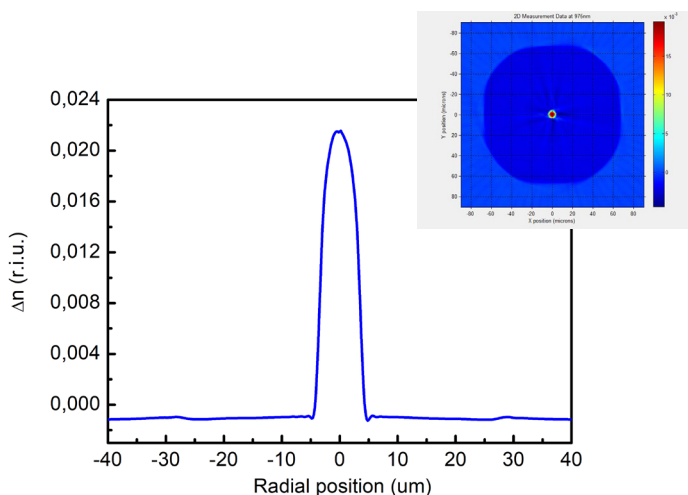
Features:

- High thulium concentration – high cladding absorption to realize short fiber lengths to reduce detrimental non-linear effects
- High slope efficiency (64 %) – efficient utilization of the pump power at 792 nm

Optical specifications DC-TDF-6/130-OCT:

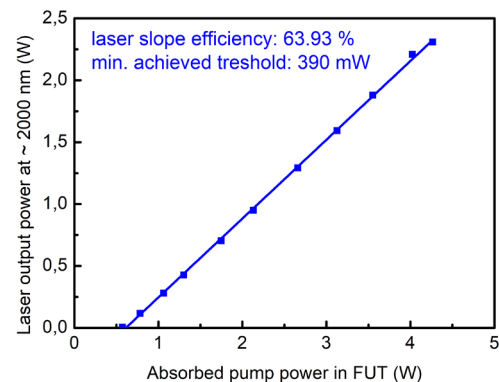
- Single-mode operation: beyond 1800 nm
- Operating wavelength: 1900-2100 nm
- Numerical aperture of the core: 0.25
- Background losses: 0.02 dB/m
- Losses due to OH ~ 0.22 dB/m at 1383 nm
- Cladding Absorption: 3.7 dB/m at 790 nm
- Concentration of thulium ions ~ 15300 ppm
- Fluorescence lifetime (3F_4 - 3H_6): 526 μ s
- Fluorescence lifetime (3H_4 - 3H_6): 17.2 μ s

Refractive index fiber profile:

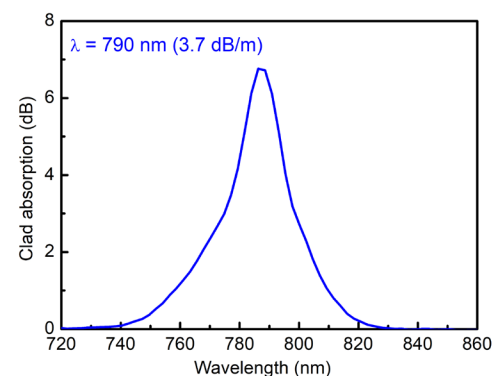


Applications:

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



Cladding absorption band around 790 nm:



Features:

- Octagon structure
- Core diameter: 6 μ m
- Cladding diameter (flat-flat): 130 ± 2 μ m
- Coating diameter: 260 ± 10 μ m
- Fluoroacrylate coating for greater fiber durability in extreme environmental operating & storage conditions

