

NUYDFTM



Ytterbium Doped 1.0 μm Laser and Amplifier Fibers

Robust and reliable active fibers for high-power lasers and amplifiers

Nufern produces the industry's broadest selection of high-power, high mode quality, high efficiency, long life laser and amplifier fibers, with the performance and reliability to satisfy the most demanding of applications. Nufern introduces our latest fiber technology in NuGEN9 Ytterbium fibers. NuGEN9 Yb-fibers are the most optimized fibers offered, balancing high absorption, reliability, and long life-time providing the best performance available. Whatever the need, SM, MM, LMA, PM, PLMA, Nufern has a world class selection of products.





Highest Performance

- High conversion efficiency, power amplifiers to ~ 90%
- Narrow linewidth at kW levels
- Single frequency at 10's of Watts
- Highest brightness systematically achieves levels near glass limit
- Highest beam quality, near diffraction limited
- Introducing NuGEN9 Yb-fibers for the highest performance & most demanding applications

Long Life

- Designed for extended service life even in unfavorable pumping conditions
- Excellent damp heat resistance
- Deployed in a myriad of lasers and amplifiers since 2002

Polarization Maintaining

- High extinction ratio using PANDA technology
- Designed for frequency conversion applications
- Ideal for coherent and spectral beam combination

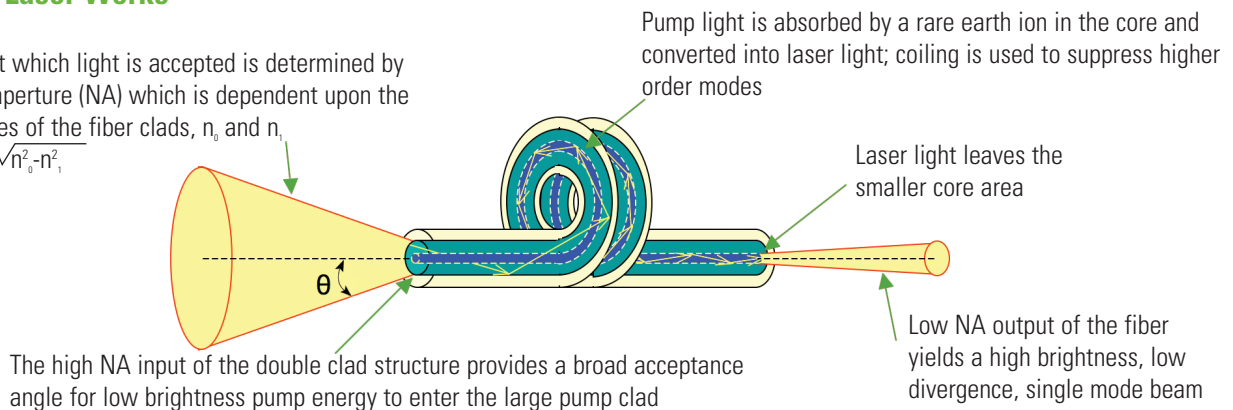
YDF Specific

- Core & clad sizes from < 4 to ~ 700 μm
- Special designs including SBS suppressing, unconventional core & cladding structures, and custom solutions

How a Fiber Laser Works

The angle, θ , at which light is accepted is determined by the numerical aperture (NA) which is dependent upon the refractive indices of the fiber clads, n_0 and n_1

$$NA = n_0 \sin\theta = \sqrt{n_0^2 - n_1^2}$$



NuGEN9 Yb-Fibers

- Produce smooth, repeatable refractive index profiles
- Improved lot to lot uniformity
- Minimizing performance variations
- High reliability and long life times

