

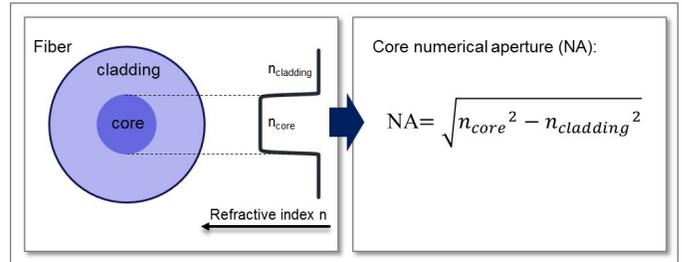
# nLIGHT now specifying *rea/NA*

1<sup>st</sup> laser fiber manufacturer specifying core NA directly from fiber refractive index measurements



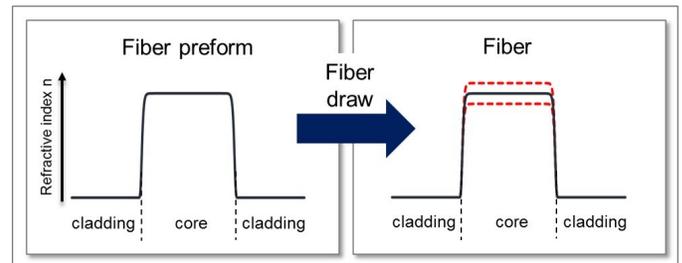
## Background

The core numerical aperture (NA) of a fiber is determined by the refractive index profile of the fiber. Key fiber characteristics, such as the mode field diameter, bend loss and the number of guided modes, are affected by the core NA and have direct influence on the fiber-to-fiber matching as well as fiber performance.



## Current state & challenges

Currently all laser fiber manufacturers specify the core NA based on measurements of the preform. The fiber draw process can influence the core NA in the fiber and cause differences between the expected performance based on the specification sheet and the actual fiber performance.



## nLIGHT's solution: *rea/NA*

nLIGHT is the first laser fiber manufacturer specifying the core NA directly from the **fiber** and not the preform refractive index measurements.

Unique advantages for our customers:

- ✓ **Most accurate fiber core NA**
- ✓ **Reduced variation in the actual fiber NA**
- ✓ **Superior predictability and control of beam quality and fiber performance**
- ✓ **Ultimate matching and minimal splice loss between active and passive fibers.**

## Schedule, affected fiber types and fiber specifications

All standard Ytterbium-doped and passive LIEKKI<sup>®</sup> fibers were transitioned to *rea/NA* specification on January 31<sup>st</sup> 2017. Core NA specification range remains unchanged for all standard fibers except for the following fiber types where the specification range was changed to conserve current fiber performance: Yb700-25/250DC-PM, Yb1200-25/250DC-PM, Yb700-30/250DC-PM and Yb1200-30/250DC-PM.