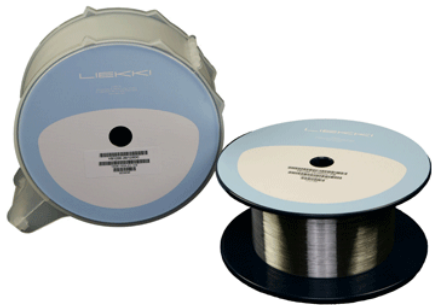


# LIEKKI™ Yb1200-20/125

## Large Mode Area Ytterbium Doped Fiber



LIEKKI™ Yb1200-20/125 fibers are highly doped fibers ideally suited for compact high-average-power pulsed amplifier applications where large mode area and short fiber length are critical for suppression of nonlinear effects.

The fibers feature a high-efficiency 20µm diameter core with low NA providing excellent beam quality. The combination of a highly doped core, large core-to-cladding ratio and efficient octagonal cladding shape provides a very high cladding absorption of 6.8dB/m to 7.1dB/m enabling shorter than 2m application lengths.

LIEKKI™ Yb1200-20/125 fibers are available as double cladding (Yb1200-20/125DC) and double cladding polarization maintaining (Yb1200-20/125DC-PM) fibers.

### Applications

- High-average-power pulsed fiber amplifiers
- Compact medium power CW lasers

### Features

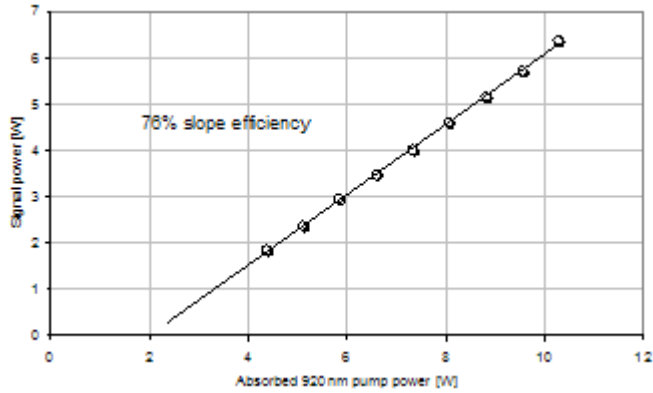
- Large, low NA core for high beam quality
- High birefringence (Yb1200-20/125-PM)
- Very high pump absorption
- Less than 2 m application length
- Low non-linear effects
- Low photodarkening
- Compatible with 125 µm standard components and tools
- 6+1-to-1 combiner in development

### Typical device specification

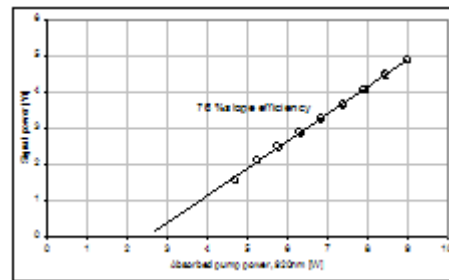
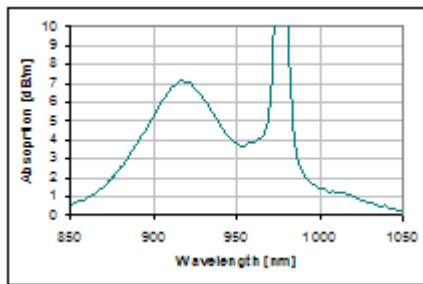
|  |      | LIEKKI™ Yb1200-20/125DC | LIEKKI™ Yb1200-20/125DC-PM |
|--|------|-------------------------|----------------------------|
| <b>Optical</b>                               |      |                         |                            |
| Peak cladding absorption at 976 nm (nominal) | dB/m | 29                      | 30                         |
| Cladding absorption at 920 nm                | dB/m | 6.8 ± 1.7               | 7.1 ± 1.7                  |
| Core numerical aperture                      |      | 0.07 ± 0.01             | 0.07 ± 0.01                |
| Birefringence                                |      |                         | > 8.0E-05                  |
| <b>Geometrical and mechanical</b>            |      |                         |                            |
| Core diameter                                | µm   | 20 ± 2                  | 20 ± 2                     |
| Core concentricity error                     | µm   | < 1.5                   | < 1.5                      |
| Cladding diameter                            | µm   | 125 ± 2                 | 125 ± 2                    |
| Cladding geometry                            |      | octagonal               | octagonal                  |
| Coating diameter                             | µm   | 245 ± 15                | 245 ± 15                   |
| Coating material                             |      | low index acrylate      | low index acrylate         |
| Cladding numerical aperture                  |      | > 0.46                  | > 0.46                     |
| Proof test                                   | kpsi | > 100                   | > 100                      |

### Typical performance data

Typical performance data for Yb1200-20/125DC



Typical performance data for Yb1200-20/125DC-PM



#### Notice

nLIGHT continually improves its products to provide its customers with outstanding quality and reliability. nLIGHT may make changes to specifications and product descriptions at any time, without notice. In addition, nLIGHT offers a limited warranty to ensure customer satisfaction. For complete details, please contact your nLIGHT sales representative.