



# NuBEAM 100 $\mu\text{m}$ Core Beam Delivery Fibers

Nufern's beam delivery NuBEAM specialty multimode step-index fibers are designed for compatibility with the majority of fiber interconnect systems and diode laser power delivery systems. These fibers feature a 100 micron core diameter, 0.22 NA and are available in two different clad diameters with a silicone coating and a transparent nylon buffer. These fibers are also available with Nufern's proprietary NuCOAT-FA coating for added power confinement or polyimide for high temperature applications. Additional clad diameters and different NAs are available upon request.

## Typical Applications

- Fiber coupled diode lasers
- Couplers and pump combiners
- Beam delivery cables
- Spectroscopy and instrumentation

## Features & Benefits

- Robust industry standard design — Compatible with majority of fiber interconnect systems
- Exceptional geometric uniformity and core/clad concentricity — Ease of assembly
- Clean room fiber draw — Eliminates coating "hot spots"
- Pure Silica Core - High resistance to optical damage

## Optical Specifications

Operating Wavelength  
Core NA  
OH Level

### BD-S100/120/360-STN

800 – 2100 nm  
0.220  $\pm$  0.020  
Low

### BD-S100/130/480-STN

800 – 2100 nm  
0.220  $\pm$  0.020  
Low

### BD-S100/130/660-STN

800 – 2100 nm  
0.220  $\pm$  0.020  
Low

## Geometrical & Mechanical Specifications

First Cladding Diameter (inner)  
Second Cladding Diameter  
Core Diameter  
First Buffer Diameter  
Second Buffer Diameter  
First Buffer Material  
Second Buffer Material  
Short Term Bend Radius  
Long Term Bend Radius  
Proof test Level

123.5  $\pm$  3.5  $\mu\text{m}$   
367.5  $\pm$  7.5  $\mu\text{m}$   
102.0  $\pm$  2.0  $\mu\text{m}$   
460  $\pm$  14  $\mu\text{m}$   
650  $\pm$  33  $\mu\text{m}$   
Silicone  
Transparent Nylon  
 $\geq$  18 mm  
 $\geq$  54 mm  
 $\geq$  100 kpsi (0.7 GN/m<sup>2</sup>)

134  $\pm$  4  $\mu\text{m}$   
490  $\pm$  10  $\mu\text{m}$   
102.00  $\pm$  2.00  $\mu\text{m}$   
580  $\pm$  20  $\mu\text{m}$   
750  $\pm$  37  $\mu\text{m}$   
Silicone  
Transparent Nylon  
 $\geq$  24 mm  
 $\geq$  72 mm  
 $\geq$  100 kpsi (0.7 GN/m<sup>2</sup>)

134.0  $\pm$  4.0  $\mu\text{m}$   
672.5  $\pm$  12.5  $\mu\text{m}$   
102.0  $\pm$  2.0  $\mu\text{m}$   
780.0  $\pm$  20.0  $\mu\text{m}$   
1100  $\pm$  55  $\mu\text{m}$   
Silicone  
Transparent Nylon  
 $\geq$  66 mm  
 $\geq$  198 mm  
 $\geq$  100 kpsi (0.7 GN/m<sup>2</sup>)



Buffer Requirements: Silicone Primary Buffer, Transparent Nylon Outer Buffer  
Low or High -OH Core: Low  
Matched or Depressed Cladding: Depressed  
Special Core Dopants: Pure Silica Core

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Custom developed fiber (FUD) specifications are subject to change without notice. Other configurations such as alternative form factors, optimized cut-off and UV cured color coating may be available. Let us know how Nufern can assist with your requirements.

