

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



Coherent'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 Coherent'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  
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

$123.5 \pm 3.5 \mu\text{m}$   
N/A  
 $367.5 \pm 7.5 \mu\text{m}$   
 $102.0 \pm 2.0 \mu\text{m}$   
 $460.0 \pm 14.0 \mu\text{m}$   
 $650.0 \pm 33.0 \mu\text{m}$   
Silicone  
Transparent Nylon  
 $\geq 18 \text{ mm}$   
 $\geq 54 \text{ mm}$   
 $\geq 100 \text{ kpsi (0.7 GN/m}^2\text{)}$

$134.0 \pm 4.0 \mu\text{m}$   
N/A  
 $490.0 \pm 10.0 \mu\text{m}$   
 $102.0 \pm 2.0 \mu\text{m}$   
 $580.0 \pm 20.0 \mu\text{m}$   
 $750.0 \pm 37.0 \mu\text{m}$   
Silicone  
Transparent Nylon  
 $\geq 24 \text{ mm}$   
 $\geq 72 \text{ mm}$   
 $\geq 100 \text{ kpsi (0.7 GN/m}^2\text{)}$

$134.0 \pm 4.0 \mu\text{m}$   
N/A  
 $672.5 \pm 12.5 \mu\text{m}$   
 $102.0 \pm 2.0 \mu\text{m}$   
 $780.0 \pm 20.0 \mu\text{m}$   
 $1100.0 \pm 55.0 \mu\text{m}$   
Silicone  
Transparent Nylon  
 $\geq 34 \text{ mm}$   
 $\geq 100 \text{ mm}$   
 $\geq 100 \text{ kpsi (0.7 GN/m}^2\text{)}$



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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www.coherent.com ; www.shop.coherent.com • Coherent products are manufactured under an ISO 9001:2008 certified quality management system.



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 Coherent can assist with your requirements.