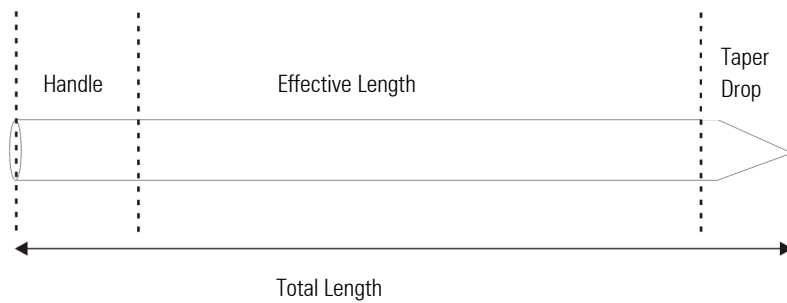


Multimode Preform 100/140

Characteristics

	Spec. Values	Unit
Core Composition	SiO ₂ /GeO ₂	
Refractive Index Profile	nearly parabolic	
Refractive Index Delta	28.8 x 10 ⁻³	
Tolerance of Delta within a Rod	4.0 x 10 ⁻³	
Numerical Aperture	0.290 ± 0.020	
Preform Diameter (O.D.)	19.0	mm
Tolerance of O.D. from Rod to Rod	± 2.0	mm
Tolerance of O.D. within a Rod	± 0.5	mm
Preform Length	600 - 1000	mm
Preform Bow	≤ 0.7	mm/m
Preform Non-Circularity	≤ 2.0	%
Clad Concentricity Error of O.D.	≤ 2.1	%

Design



- The drop end (Taper) is formed as a cone and the "handle end" is a tube or rod with the same diameter as the preform.

$$O.D._{handle} = O.D._{preform}$$

For further information about our Multimode Preforms and other j-fiber products and services, please contact us:

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Appearance

The general appearance shall be dustfree and flawless. There shall be no bubbles in the core. Bubbles in the cladding shall be permitted but the number and size(s) of the bubbles shall not exceed the values stipulated in the table below. There shall be no substantial surface damage or contamination.

Bubble Size s/mm

		Acceptable Number per Preform
In the core		not allowed
In the cladding	$s \leq 0.3$	no count
	$0.3 < s \leq 0.8$	5
	$0.8 < s \leq 2.0$	2
	$s > 2.0$	0

Mass

- Chargeable mass (m) is calculated with the formula:

$$m[g] = 2.2 \times 3.14 \times (\text{outer diameter [cm]}/2)^2 \times (\text{effective length [cm]})$$

2.2 = specific weight of SiO₂ [g/cm³]

- The "effective length" is the length of that piece of the preform where every parameter is within stated preform specifications.

Target Fiber Specifications

	Specified Values	Unit
Core Diameter	100 ± 4.0	µm
Core Non-Circularity	≤ 6.0	%
Core/Clad Concentricity Error	≤ 3.0	µm
Cladding Diameter	140 ± 3.0	µm
Cladding Non-Circularity	≤ 2.0	%
Attenuation	850nm	≤ 4.0
	1300nm	≤ 1.5
	1383nm	≤ 8.0
Bandwidth ¹	850nm	≥ 100
	1300nm	≥ 100

¹j-fiber guarantees the bandwidth for 85% of the output. Other bandwidth combinations are available on request.

j-fiber does not guarantee the following parameters as they are dependent upon individual draw conditions:

- fiber yield
- fiber strength

Expected Fiber Length

The expected fiber length (L=[km]) assuming a 100% drawing yield can be calculated using the following formula:

$$L[\text{km}] = \{(d[\text{mm}]/0.140)^2 \times e[\text{mm}]\} \times 10^{-6}$$

d=preform diameter
e=effective length

Inspection Documents

Preform ID	Length of Handle End
Mass	Diameter Typical
Effective Length	Diameter Max
Length of Drop End	

The inspection documents will be supplied with each shipment. The preform data can also be transmitted electronically and precede each shipment (MS Windows, floppy disk, email etc.)

Packaging

Every preform is individually packaged as such to withstand normal transportation hazards and handling.

Each preform is identified by an ID number written on an adhesive label.

Ordering Information

To order j-fiber optical preform please call, fax or email us and specify the following parameters:

Preform Type: j-fiber Multimode Preform 100/140

Preform Quantity: kg

Other: desired ship date, special requests

All fibers and preforms are subject to j-fiber's ongoing process and quality improvement programs ensuring excellent performance and high reliability. We reserve the right to make changes to the above specification without notice.

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