



GORE™ Fiber Optic Ribbon Cable

Executive Summary

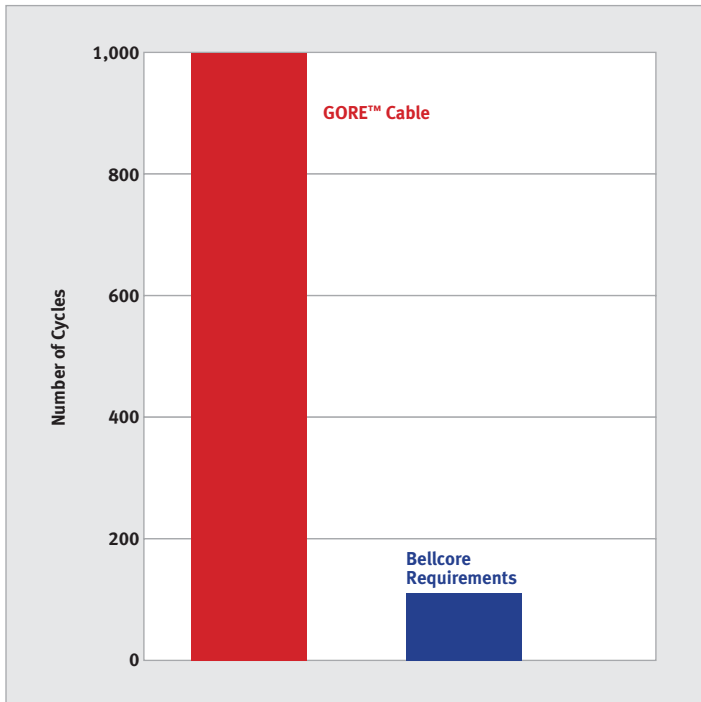
GORE™ Fiber Optic Ribbon Cables are the world's most durable ribbon interconnects for the harshest environments. The cables can be pulled with a tensile force of 200 lbs. while being routed through a 1" conduit. These cables also feature exceptional density, flexibility, flex life, and impact resistance while meeting the requirements of the telecommunications markets.

UNSURPASSED RELIABILITY

Gore's mass terminable fiber optic ribbon cables have been engineered to have the highest density in the smallest package for your applications. Reliability of our cables is maintained through use of Gore's proprietary ePTFE Firm-Tube buffer technology. As a result, GORE™ Ribbon Cables can perform over 1,000 flex cycles on a 0.5" bend radius using standard gang connectors and splices.

Figure 1 demonstrates how Gore's fiber optic cables far exceed the Bellcore requirements for flex life. GORE™ Cables also outperform other Bellcore requirements including impact, tensile loading, twisting and compression.

FIGURE 1. FLEX LIFE PERFORMANCE



GORE™ High Reliability Fiber Optic Interconnects

FEATURES AND BENEFITS

- High flex life over 1,000 flex cycles on a 1/2" bend radius
- Small size, light weight
- Low profile (0.090")
- Non-kinking
- Crush resistant
- Mates with gang connectors and splices

BROAD APPLICATION

GORE™ Fiber Optic Ribbon Cables are ideal for use in telecommunications and industrial marketplaces where ease of termination and high fiber density are desired. Because of Gore's extreme durability, it can be routed in areas where most other fiber optic cables fail. Applications benefiting from the use of these cables include central office switches, parallel computing clusters, LANs, remote testing and under-carpet cabling.

EXTENSIVE CAPABILITIES

GORE™ Cable is available in various configurations for your demanding applications. Standard configurations are listed on page 3. Hybrid and other constructions are also available. Most mass termination systems and connectors are also available for telecommunications and industrial applications.

HARSH ENVIRONMENTS

GORE™ Fiber Optic Cables allow you to implement optical solutions in the harshest environments. Because of our material expertise, the most robust optical planar packages can be manufactured to meet application needs. Gore has a wide range of experience with various fluoropolymers and thermoplastics and is the world leader in ePTFE processing — the basis for our FIRM-TUBE buffering system. Our standard fiber optic ribbon cables provide superior cut through resistance, abrasion resistance, and tensile strength while maintaining flexibility. Cables are also available for aerospace and other harsh applications.

LOW SKEW PERFORMANCE

GORE™ Fiber Optic Ribbon Cables preserve signal integrity from chip to chip to ensure optimum optical performance. Loss increases are negligible as the cable goes through the rigors of everyday handling. Ultra low skew cables can also be purchased for demanding parallel processing applications. Skew can cause problems for high speed synchronous data transmission, but with GORE™ Fiber Optic Low Skew Cables, only 2ps/m of cable skew is present. This allows for greater system design flexibility and saves clock cycles for other tasks.

CABLE DESCRIPTION STANDARD

1. Design of Optical Fiber Ribbon Cable	
A. Optical Fiber O.D.	.250mm
B. Optical Fiber Type	Single-mode or multi-mode
C. Buffer	ePTFE/MIL-W-81822/1A composite
D. Core Cable Thickness	.41mm ± .05mm (.016 ± .002")
E. Binder	ePTFE
F. Strength Member	Aramid fiber
G. Jacket Type	Plenum or Riser Rated
H. Jacket Color	Yellow for single-mode Orange for multi-mode
I. Cable Thickness	2.29mm (.090") maximum

FIGURE 2. GORE™ OPTICAL RIBBON CONSTRUCTION
GORE™ High Reliability Fiber Optic Laminate Construction

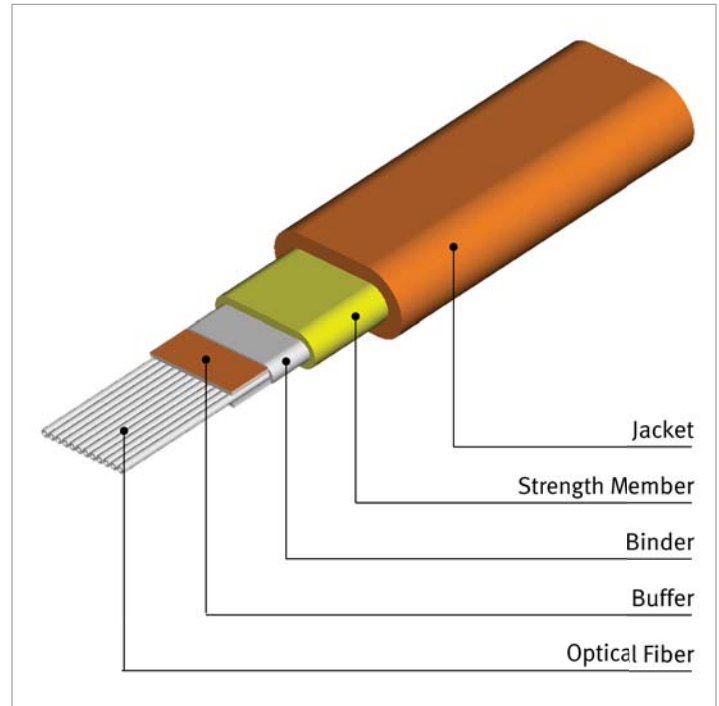


FIGURE 3. GORE™ OPTICAL RIBBON ASSEMBLIES
GORE™ High Reliability Fiber Optic Laminate Assemblies

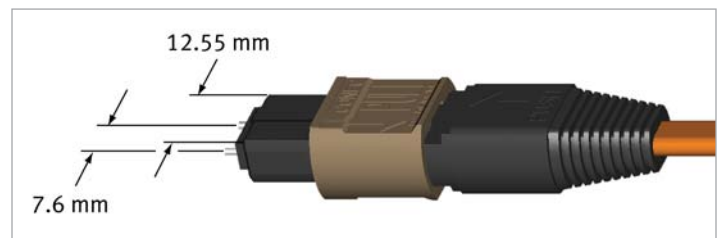


TABLE A

Standard GORE™ Ribbon Configurations, Cable Dimensions

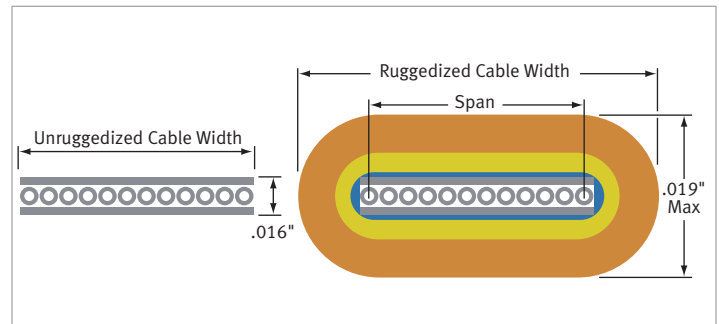
Part No.	No. of fibers	Span ±.050mm (.002")	Ruggedized Cable Width ±.050mm (.002")	Unruggedized Cable Width ±.050mm (.002")
FOA 8100/*/2 /**	2	.250mm (.0098")	2.59mm (.102")	.70mm (.028")
FOA 8100/*/4 /**	4	.750mm (.0295")	3.07mm (.121")	1.20mm (.047")
FOA 8100/*/6 /**	6	1.250mm (.0492")	3.58mm (.141")	1.70mm (.067")
FOA 8100/*/8 /**	8	1.750mm (.0689")	4.09mm (.161")	2.20mm (.087")
FOA 8100/*/9 /**	9	2.000mm (.0787")	4.32mm (.170")	2.45mm (.096")
FOA 8100/*/10 /**	10	2.250mm (.0886")	4.57mm (.180")	2.70mm (.106")
FOA 8100/*/12 /**	12	2.750mm (.1083")	5.08mm (.200")	3.20mm (.126")
FOA 8100/*/16 /**	16	3.750mm (.1476")	6.07mm (.239")	4.20mm (.165")
FOA 8100/*/18 /**	18	4.250mm (.1673")	6.58mm (.259")	4.70mm (.185")

*Denotes fiber type (1=62.5/125/250; 2=9/125/250; 4=50/125/250)

** Denotes jacket type (1=Plennm/Riser Rated; 2=General Purpose)

CABLE SPECIFICATIONS

1. Operating Temperature	-20°C to + 85°C
2. Storage Temperature	-60°C to + 70°C
3. Max tensile loading (Installation)	200 lbs
4. Max tensile loading (Operation)	150 lbs
5. Min bend radius	0.5" (12.7 mm)
6. Flex	1000 cycles per EIA 455-104
7. Impact	2.2 lb-ft per EIA 455-25
8. Compressive strength	57 lb/in per EIA 455-41





GORE™ Fiber Optic Ribbon Cable

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