

Cable Selection Guide

Introduction

The Belden line of Optical Fiber Cables represents a new selection of the best optical fiber cable products offered by the consolidated resources of the Belden organization. The unmatched resources of Belden have now generated a complete line of indoor and outdoor cable products in tight buffered and loose tube constructions. This offering now expands the available applications for Belden optical fiber cable.

Customer Service

Most of our optical fiber cables are available from stock. Many of these are available off-the-shelf from distributors. If you have a new or unusual application, or you cannot find a optical fiber cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1 for additional information.

Cable Selection Guide

Optical Fiber

Fiber Selection Chart

Type	Grade	Fiber Size (μ)	Standards Compliance	Link Length (m)	Data Rate (Gb)
Multimode	6	50/125	exceeds TIA/EIA-568-B.3-1 ISO 11801 OM3	500	10
	5	50/125	TIA/EIA-568-B.3-1 ISO 11801 OM3	300	10
	4	50/125	TIA/EIA-568-B.3	600	1
	3	62.5/125	TIA/EIA-568-B.3	1,000	1
	2	62.5/125	TIA/EIA-568-B.3	550	1
	1*	62.5/125	EDDL grade†	—	—
Single-mode	—	—	ITU G.652.c/d††	—	—

* Grade 1 fibers are available upon request.

† Used in most current cable plants, but not recommended for future installations, except as patch cordage

†† Low water peak fiber with advantages for CWDM applications

Color Code Charts

Jacket Color Chart

Cable Type	Jacket Color
Loose Tube & Outside Plant Cables	Black
Industrial Tray Cables	Orange
Tight Buffered Cables	
Grades 2,3,4	Orange
Grades 5,6	Aqua
Single-mode	Yellow

Nonstandard jacket colors are available upon request.

Fiber Sub-unit Color Code Chart*

Fiber/Tube No.	Color	Fiber/Tube No.	Color
1	Blue	7	Red
2	Orange	8	Black
3	Green	9	Yellow
4	Brown	10	Violet
5	Slate	11	Rose
6	White	12	Aqua

* Per EIA/TIA 598-A

Optical Specifications

Grade:	2	3	4	5	6	Single-mode Enhanced ⁶
Glass Type:	62.5/125μ	62.5/125μ	50/125μ	50/125μ	50/125μ	
Operating Wavelength (nm)	850/1300	850/1300	850/1300	850/1300	850/1300	1310/1550
Min. OFL ¹ Bandwidth (MHz-km)	200/500	200/500	500/500	1500/500	3000/500	—
Min. Laser ² Bandwidth (MHz-km)	220/500	385/500	510/500	2000/500	4000/500	—
Max. Attenuation Loose Tube (dB/km)	3.25/1.0	3.25/1.0	3.0/1.0	3.0/1.0	3.0/1.0	0.40/0.30
Max. Attenuation Tight Buffered ³ (dB/km)	3.50/1.25	3.50/1.25	3.50/1.25	3.50/1.25	3.50/1.25	0.80/0.50
100 Mb Fast Ethernet Min. Link Length (meters S/L ⁴)	300/2000	300/2000	300/2000	300/2000	300/2000	—/5000
1 Gb Ethernet Min. Link Length (meters S/L ⁴)	300/550	500/1000	600/600	1000 ⁵ /600	1000 ⁵ /600	—/5000
10 Gb Ethernet Min. Link Length (meters S/L ⁴)	35/300	35/300	85/300	300/300	500/300	—/10,000

¹ OFL = Overfilled Launch

² Effective Modal Bandwidth, determined by RML or DMD performance specifications

³ Max. Attenuation for Tight Buffered, Ribbon, Micro-Loose Tube and Loose Tube Plenum Cables

⁴ S/L = Short wavelength (850 nm) / Long wavelength (1310 nm)

⁵ >2000 meters for engineered links

⁶ Low water peak Single-Mode suitable for CWDM use complies with ITU G.652.c/d

Central Tube Cable

Loose Tube—Outdoor, and Outdoor Armored

Applications

- Campus OSP backbones
- Drop cable
- Telecommunications and data trunk
- Direct burial (armored only)
- Lashed aerial

Product Description

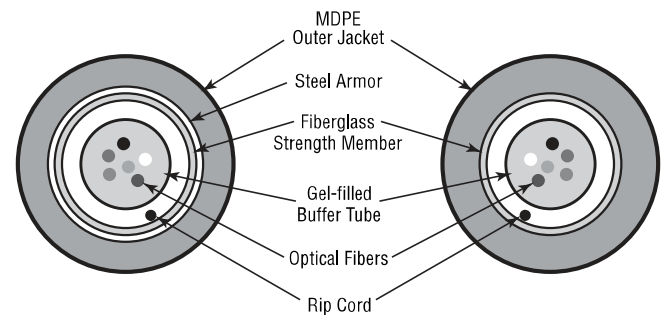
Economical option for low fiber counts. Quick and easy end preparation. Fully waterblocked with gel-filled buffer tube. No rods – easy handling. Crush, impact and abrasion resistant.

Jacket Material	PE
Buffer Tube	PBT
Core Wrap	Water Swellable Tape
Strength Member	Fiberglass
Armor	Corrugated Steel
Color Codes (Jacket & Fibers)	Per EIA/TIA 598-A, see page 10.2
Jacket Color	Black

Specifications

Temperature Range	
Storage	-40 to +70°C
Operating	-40 to +70°C
Crush Resistance (EIA-455-41)	2000 N/cm
Impact Resistance (EIA-455-25)	2000 Impacts @ 1.6 N-m
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD
Optical Specifications	See page 10.2

Fiber Bundle Detail



SINGLE ARMOR

ALL DIELECTRIC

No. of Fibers	Belden Part Number				Outside Diameter		Weight		Max. Install Load	
	62.5 / 125µm Std. / 1 Gbe	50 / 125µm Std. / 1 Gbe	50 / 125µm 10 Gbe – 300M	Single-mode Enhanced	Inch	mm	Lbs./1000'	kg/km	Lbs.	N

Central Tube Series

Outdoor										
2	M9B150	M9A150	M9C150	M9W150	0.325	8.26	36	54	600	2700
4	M9B151	M9A151	M9C151	M9W151	0.325	8.26	36	54	600	2700
6	M9B152	M9A152	M9C152	M9W152	0.325	8.26	36	54	600	2700
8	M9B153	M9A153	M9C153	M9W153	0.325	8.26	36	54	600	2700
10	M9B154	M9A154	M9C154	M9W154	0.325	8.26	36	54	600	2700
12	M9B155	M9A155	M9C155	M9W155	0.325	8.26	36	54	600	2700
Outdoor Armored										
2	M9B170	M9A170	M9C170	M9W170	0.410	10.41	72	108	600	2700
4	M9B171	M9A171	M9C171	M9W171	0.410	10.41	72	108	600	2700
6	M9B172	M9A172	M9C172	M9W172	0.410	10.41	72	108	600	2700
8	M9B173	M9A173	M9C173	M9W173	0.410	10.41	72	108	600	2700
10	M9B174	M9A174	M9C174	M9W174	0.410	10.41	72	108	600	2700
12	M9B175	M9A175	M9C175	M9W175	0.410	10.41	72	108	600	2700

All optical fiber products can be supplied in compliance with RoHS regulations. Please contact Customer Service for more details.