

Single Jacket, All Dielectric Cable

Loose Tube — Outdoor, and Indoor/Outdoor Riser Rated

Applications

- Medium to high fiber count requirements
- Inter-building duct installations
- Lashed aerial
- Indoor/outdoor
- Industrial outside plant

Product Description

Gel-filled buffer tube prevents water migration. All-dielectric strength member. Available as Riser rated cable, thereby eliminating the need for service entrance splicing to in-building cable. Full dielectric construction, no grounding required. Available with up to 216 fibers. Length markings in meters for easy determination of cable length.

Jacket Material	
Outdoor	PE
Riser	PVC
Buffer Tube	PBT
Strength Member	Aramid Yarn
Central Strength Member	E-Glass
Color Code (Buffer)	Per EIA/TIA 598-A, see page 10.2
Jacket Color	Black

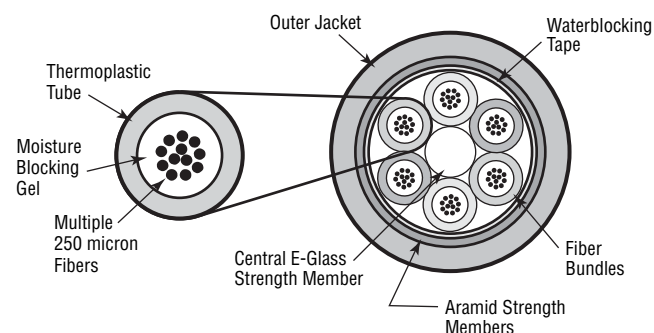
Ratings

Riser	
UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	UL 1666

Specifications

Temperature Range (Outdoor Series)	
Storage	-50 to +80°C
Operating	-40 to +70°C
Temperature Range (Riser Series)	
Storage	-40 to +80°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



No. of Fibers	Fibers Per Tube	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

Loose Tube Series

Outdoor											
6	6	M9B510T	M9A510T	M9C510T	M9W510T	0.38	9.65	44	65	600	2700
12	6	M9B511T	M9A511T	M9C511T	M9W511T	0.38	9.65	44	65	600	2700
24	6	M9B500T	M9A500T	M9C500T	M9W500T	0.38	9.65	45	67	600	2700
36	6	M9B502T	M9A502T	M9C502T	M9W502T	0.38	9.65	47	70	600	2700
48	12	M9B505T	M9A505T	M9C505T	M9W505T	0.48	12.19	70	104	600	2700
72	12	M9B507T	M9A507T	M9C507T	M9W507T	0.48	12.19	70	104	600	2700
96	12	M9B513T	M9A513T	M9C513T	M9W513T	0.55	13.89	93	138	600	2700
144	12	M9B509T	M9A509T	M9C509T	M9W509T	0.70	17.78	149	222	600	2700
216	12	M9B520T	M9A520T	M9C520T	M9W520T	0.72	18.16	148	220	600	2700
Riser (NEC/CEC OFNR/OFN FT4)											
6	6	M9B810	M9A810	M9C810	M9W810	0.38	9.65	63	94	600	2700
12	6	M9B811	M9A811	M9C811	M9W811	0.38	9.65	62	92	600	2700
24	6	M9B812	M9A812	M9C812	M9W812	0.38	9.65	61	91	600	2700
36	6	M9B813	M9A813	M9C813	M9W813	0.38	9.65	60	89	600	2700
48	12	M9B814	M9A814	M9C814	M9W814	0.48	12.19	89	132	600	2700
72	12	M9B815	M9A815	M9C815	M9W815	0.48	12.19	87	129	600	2700
96	12	M9B816	M9A816	M9C816	M9W816	0.55	13.89	114	170	600	2700
144	12	M9B817	M9A817	M9C817	M9W817	0.70	17.78	187	278	600	2700

Alternative fiber counts are available.

Single Jacket, All Dielectric Cable

Loose Tube — Indoor/Outdoor Plenum Rated

Applications

- Medium to high fiber count requirements
- Inter-building duct installations
- Lashed aerial
- Indoor/outdoor
- Campus backbones
- Data Centers
- High Density Cable Trays

Product Description

Dry waterblocking technology used within tubes and under jacket. Available as Plenum rated cable, thereby eliminating the need for service entrance splicing to in-building cable. Small diameter and bend radius facilitate installation in tight spaces. Full dielectric construction, no grounding required. Available with up to 144 fibers. Fibers grouped into sets of 12 for maximum density. Length markings in meters for easy determination of cable length.

Jacket Material	
Non-unitized	PVC
Unitized	PVDF
Buffer Tube	PVC
Strength Member	E-Glass and Aramid Yarn
Central Strength Member	Upjacketed
Color Code (Buffer)	Per EIA/TIA 598-A, see page 10.2
Jacket Color	Black

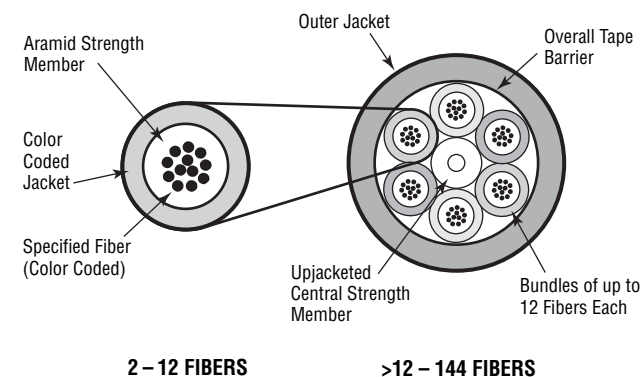
Ratings

Plenum	
UL Type	OFNP
cUL Type	OFN FT6
Flame Resistance	NFPA 262

Specifications

Temperature Range	
Storage	-40 to +80°C
Operating	-40 to +70°C
Installation	0 to +60°C
Crush Resistance (EIA-455-41)	2000 N/cm
Impact Resistance (EIA-455-25)	2000 Impacts @ 1.6 N-m
Cyclic Flexing (EIA-455-104)	2000 cycles, min.
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD
Optical Specifications	See page 10.2

Fiber Bundle Detail



No. of Fibers	Fibers Per Tube	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

Loose Tube Series

Plenum (NEC/CEC OFNP/OFN FT6)											
6	6	M9B202	M9A202	M9C202	M9W202	0.265	6.70	33	49	320	1423
12	12	M9B204	M9A204	M9C204	M9W204	0.265	6.70	33	49	320	1423
24	12	M9B205	M9A205	M9C205	M9W205	0.359	9.12	47	70	405	1801
36	12	M9B206	M9A206	M9C206	M9W206	0.359	9.12	47	70	405	1801
48	12	M9B207	M9A207	M9C207	M9W207	0.359	9.12	48	71	405	1801
72	12	M9B209	M9A209	M9C209	M9W209	0.429	10.90	71	106	585	2602
96	12	M9B211	M9A211	M9C211	M9W211	0.501	12.73	105	156	903	4017
144	12	M9B215	M9A215	M9C215	M9W215	0.665	16.89	189	281	1263	5618

Alternative fiber counts and hybrid constructions are available.

Double Jacket, Armored Cable

Loose Tube – Outdoor, and Indoor/Outdoor Riser Rated

Applications

- Direct burial
- Low to high fiber count requirements
- Inter-building duct installations
- Indoor/outdoor
- Industrial outside plant

Product Description

Gel-filled buffer tube prevents water migration. Available as Riser rated cable, thereby eliminating the need for service entrance splicing to in-building cable. Rodent resistant. Available in sizes up to 216 fibers. Length markings in meters for easy determination of cable length.

Jacket Material	
Outdoor	PE
Riser	PVC
Buffer Tube	
Outdoor	PBT
Riser	PVC
Strength Member	
Aramid Yarn	
Central Strength Member	
E-Glass	
Armor	
Corrugated Steel Tape	
Color Code (Buffer)	
Per EIA/TIA 598-A, see page 10.2	
Jacket Color	
Black	

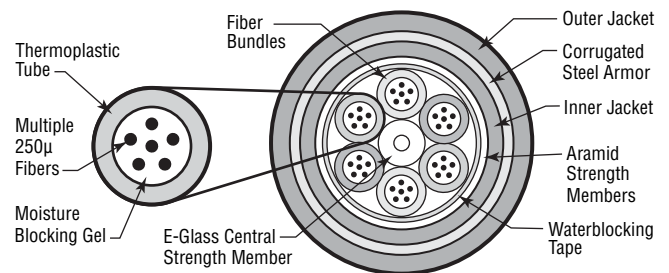
Ratings

Riser	
UL Type	OFCR
cUL Type	OFC FT4
Flame Resistance	UL 1666

Specifications

Temperature Range (Outdoor)	
Storage	-50 to +80°C
Operating	-40 to +70°C
Temperature Range (Riser)	
Storage	-40 to +80°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



No. of Fibers	Fibers Per Tube	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

Loose Tube Series — Armored

Outdoor											
6	6	M9B381T	M9A381T	M9C381T	M9W381T	0.53	13.46	101	150	600	2700
12	6	M9B382T	M9A382T	M9C382T	M9W382T	0.53	13.46	102	152	600	2700
24	6	M9B384T	M9A384T	M9C384T	M9W384T	0.53	13.46	103	153	600	2700
36	6	M9B386T	M9A386T	M9C386T	M9W386T	0.53	13.46	103	153	600	2700
48	12	M9B389T	M9A389T	M9C389T	M9W389T	0.65	16.51	144	214	600	2700
72	12	M9B391T	M9A391T	M9C391T	M9W391T	0.65	16.51	142	211	600	2700
96	12	M9B398T	M9A398T	M9C398T	M9W398T	0.69	17.53	168	250	600	2700
144	12	M9B393T	M9A393T	M9C393T	M9W393T	0.87	22.10	241	359	600	2700
216	12	M9B400T	M9A400T	M9C400T	M9W400T	0.87	22.10	241	359	600	2700
Riser (NEC/CEC OFCR/OFC FT4)											
6	6	M9B890	M9A890	M9C890	M9W890	0.54	13.72	138	205	600	2700
12	6	M9B891	M9A891	M9C891	M9W891	0.54	13.72	137	204	600	2700
24	6	M9B892	M9A892	M9C892	M9W892	0.54	13.72	136	202	600	2700
36	6	M9B893	M9A893	M9C893	M9W893	0.54	13.72	135	201	600	2700
48	12	M9B894	M9A894	M9C894	M9W894	0.66	16.76	176	262	600	2700
72	12	M9B895	M9A895	M9C895	M9W895	0.66	16.76	172	256	600	2700
96	12	M9B896	M9A896	M9C896	M9W896	0.70	17.78	206	307	600	2700
144	12	M9B897	M9A897	M9C897	M9W897	0.88	22.35	302	449	600	2700

Double Jacket, Heavy-Duty Cable

Loose Tube — Outdoor

Applications

- Direct burial
- Harsh environments
- Applications requiring good ozone-, moisture- and weather-resistance

Product Description

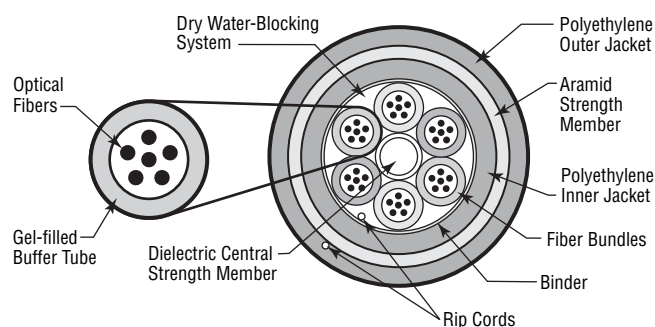
Gel-filled buffer tube prevents water migration.
Available with up to 216 fibers.

Jacket Material	
Outer Jacket:	PE
Inner Jacket:	PE
Buffer Tube	
	PBT
Strength Member	
	Aramid Yarn
Central Strength Member	
	E-Glass
Core Wrap	
	Water Swellable Tape
Color Code (Buffer)	
	Per EIA/TIA 598-A, see page 10.2
Jacket Color	
	Black

Specifications

Temperature Range	
Storage	-50 to +80°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



No. of Fibers	Fibers Per Tube	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

Loose Tube Series — Heavy Duty

Outdoor											
2	2	M9B840	M9A840	M9C840	M9W840	0.44	11.18	60	89	600	2700
4	4	M9B841	M9A841	M9C841	M9W841	0.44	11.18	60	89	600	2700
6	6	M9B842	M9A842	M9C842	M9W842	0.44	11.18	60	89	600	2700
8	4	M9B843	M9A843	M9C843	M9W843	0.44	11.18	60	89	600	2700
12	6	M9B844	M9A844	M9C844	M9W844	0.44	11.18	60	89	600	2700
18	6	M9B845	M9A845	M9C845	M9W845	0.44	11.18	60	89	600	2700
24	6	M9B846	M9A846	M9C846	M9W846	0.44	11.18	60	89	600	2700
36	6	M9B847	M9A847	M9C847	M9W847	0.44	11.18	60	89	600	2700
48	12	M9B848	M9A848	M9C848	M9W848	0.54	13.72	136	202	600	2700
72	12	M9B849	M9A849	M9C849	M9W849	0.54	13.72	136	202	600	2700
96	12	M9B820	M9A820	M9C820	M9W820	0.61	15.37	152	226	600	2700
144	12	M9B821	M9A821	M9C821	M9W821	0.76	19.30	255	379	600	2700
216	12	M9B822	M9A822	M9C822	M9W822	0.76	19.30	255	379	600	2700

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

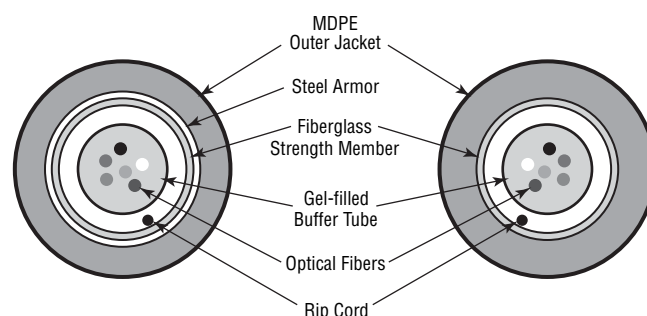
Economical option for low fiber counts. Quick and easy end preparation. Fully waterblocked with gel-filled buffer tube. No rods — easy handling. Crush, impact and abrasion resistant.

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.

TrayOptic® Heavy-Duty, All Dielectric Cable

Loose Tube — Indoor/Outdoor Riser Rated

Applications

- Industrial and other harsh environment applications
- Factory automation
- Direct burial

Product Description

Laser Optimized Fiber to handle Gigabit Ethernet light sources and expanded bandwidth requirements. Passes IEEE 383-2003 flame test. Waterblocking agent for moisture protection. CPE outer jacket option provides extra chemical or abrasion resistance.

Fiber Type	62.5/125μ
Jacket Material	PVC or CPE
Strength Member	Aramid Yarn
Jacket Color	Orange

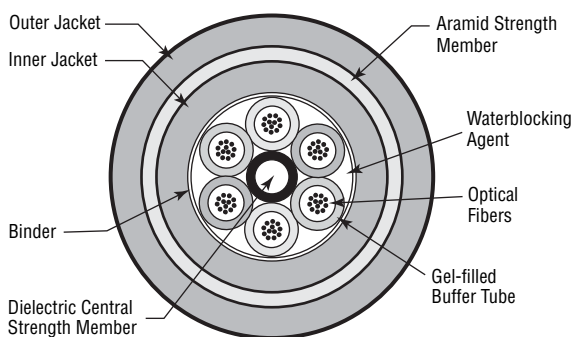
Ratings

Riser	
UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	IEEE 383-2003

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 @ 1.6N-m
Cyclic Flexing (EIA-455-104)	25 cycles, 12 lbs., 20 x OD radius min.
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD
Maximum Installation Load	600 lbs. (2700 N)
Optical Specifications	See page 10.2

Fiber Bundle Detail



No. of Fibers	Fibers Per Tube	Outside Diameter		PVC Jacket			CPE Jacket		
		Inches	mm	Belden Part No.	Weight Lbs./1000'	Weight kg/km	Belden Part No.	Weight Lbs./1000'	Weight kg/km

TrayOptic Series

Riser (NEC/CEC OFNR/OFN FT4)									
2	2	0.440	11.18	I100255	88	131	I100266	83	124
4	4	0.440	11.18	I100455	88	131	I100466	83	124
6	6	0.440	11.18	I100655	88	131	I100666	83	124
8	4	0.440	11.18	I400855	88	131	I400866	83	124
12	6	0.440	11.18	I601255	88	131	I601266	83	124
18	6	0.440	11.18	I601855	88	131	I601866	83	124
24	6	0.440	11.18	I602455	88	131	I602466	83	124
36	6	0.440	11.18	I603655	88	131	I603666	83	124
48	12	0.540	13.72	I604855	136	202	I604866	129	192
60	12	0.540	13.72	I606055	136	202	I606066	129	192
72	12	0.540	13.72	I607255	136	202	I607266	129	192