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

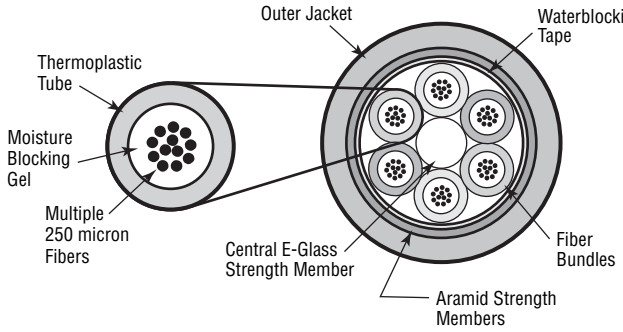
Ratings

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

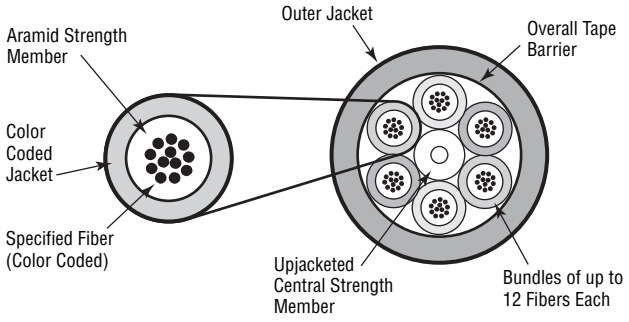
Ratings

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



2 – 12 FIBERS **>12 – 144 FIBERS**

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

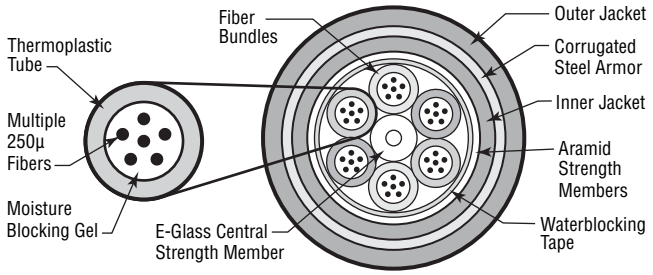
Ratings

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

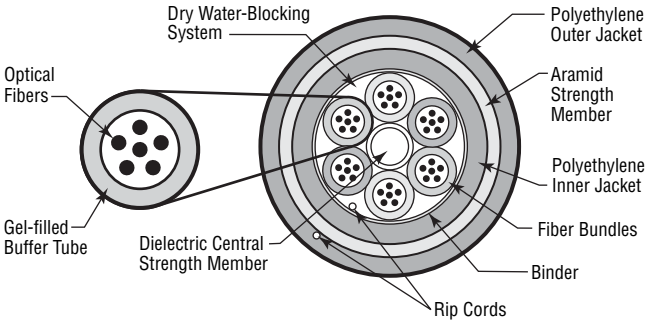
Gel-filled buffer tube prevents water migration.
Available with up to 216 fibers.

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

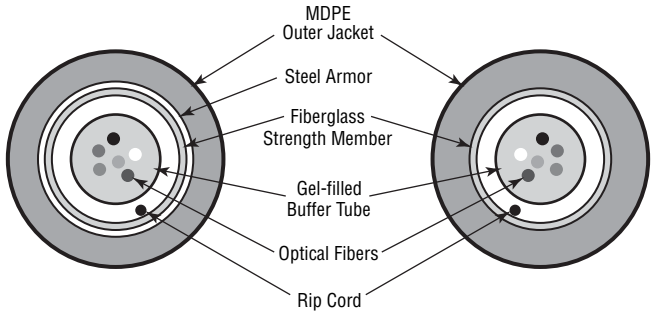
Economical option for low fiber counts. Quick and easy end preparation. Fully waterblocked with gel-filled buffer tube. No rods – easy handling. Crush, impact and abrasion resistant.

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

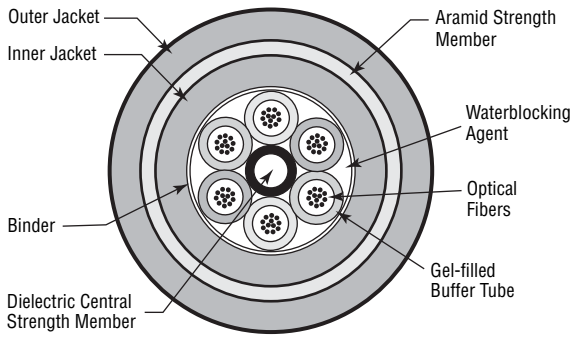
Ratings

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