

Interconnect Cable — Simplex and Duplex

Tight Buffer — Riser & Plenum Rated

Applications

- Patch panels
- Workstation equipment connections
- Horizontal distribution in open office environments

Product Description

Interconnect Cables are designed for low fiber-count premises environments. They are small and very flexible, making them ideal for confined spaces. Their aesthetic appearance makes these cables suitable for use in open office environments. Available in 1 or 2 fibers. One sub-unit is marked to permit easy identification of transmit and receive fibers. Length markings to facilitate installation.

Jacket Material	PVC
Tight Buffer	PVC
Strength Member	Aramid Yarn
Color Code (Tight Buffer)	Per EIA/TIA 598-A, see page 10.2
Jacket Color	
Single-mode	Yellow
62.5/125 μm	Orange
50/125 μm / 1 Gbe	Orange
50/125 μm / 10 Gbe	Aqua

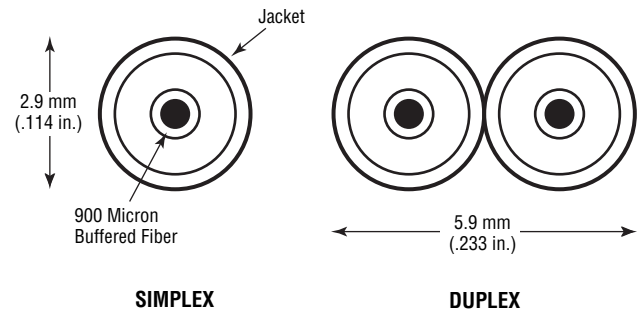
Ratings

Riser	
UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	UL 1666
Plenum	
UL Type	OFNP
cUL Type	OFN FT6
Flame Resistance	NFPA 262

Specifications

Temperature Range	
Storage	-40 to +70°C
Operating	-20 to +70°C
Crush Resistance (EIA-455-41)	200 N/cm
Impact Resistance (EIA-455-25)	20 Impacts @ 1.0 N-m
Cyclic Flexing (EIA-455-104)	2000 cycles, min.
Min. Bend Radius	
Installation	15 x OD
Long Term	10 x OD
Optical Specifications	See page 10.2

Fiber Bundle Detail



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

Interconnect Cable Series

Riser (NEC/CEC OFNR/OFN FT4)										
1	M97112	M9A001	M9C001	M9W001	0.114	2.9	6	9	90	400
2	M96915	M9A002	M9C002	M9W002	0.11 x 0.23	2.9 x 5.9	12	18	180	801
Plenum (NEC/CEC OFNP/OFN FT6)										
1	M98086	M9A003	M9C003	M9W003	0.114	2.9	6	9	90	400
2	M96919	M9A004	M9C004	M9W004	0.11 x 0.23	2.9 x 5.9	13	19	180	801

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

Distribution Cable

Tight Buffer — Indoor Riser, Plenum & LSZH Rated

Applications

- Low to high fiber count requirements
- In-building backbone
- Fiber-to-the-desk applications
- Computer room

Product Description

Flexible thermoplastic jacket provides excellent handling characteristics. Fibers and cable sub-units are color coded for easy identification. Length markings in meters for easy determination of cable length. Full dielectric construction, no grounding required. For Riser offering, MSHA approved cables are available.

Jacket Material

Riser & Non-unitized Plenum	PVC
Unitized Plenum	PVDF
Low Smoke Zero Halogen	LSZH

Tight Buffer

Riser & Plenum	PVC
Low Smoke Zero Halogen	LSZH

Strength Member

Aramid Yarn

Color Code (Tight Buffer)

Per EIA/TIA 598-A, see page 10.2

Jacket Color

Single-mode	Yellow
62.5/125 μ m	Orange (Green for LSZH only)
50/125 μ m / 1 Gbe	Orange
50/125 μ m / 10 Gbe	Aqua

Ratings

Riser

UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	UL 1666

Plenum

UL Type	OFNP
cUL Type	OFN FT6
Flame Resistance	NFPA 262

Low Smoke Zero Halogen

UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	UL 1666

Specifications

Temperature Range

Storage	-40 to +80°C
Operating	-20 to +70°C

Crush Resistance (EIA-455-41) 2000 N/cm

Impact Resistance (EIA-455-25) 2000 Impacts @ 1.6 N-m

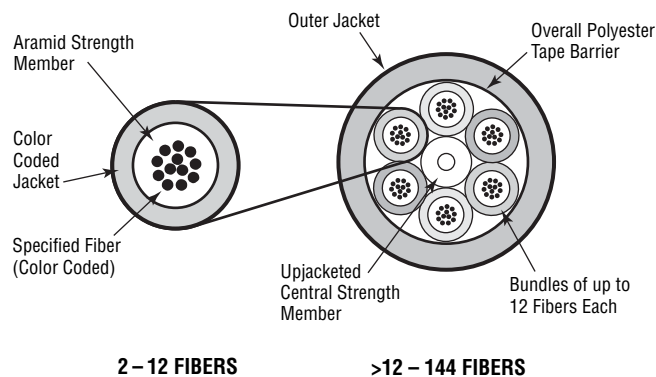
Cyclic Flexing (EIA-455-104) 2000 cycles, min.

Min. Bend Radius

Installation	15 x OD
Long Term	10 x OD

Optical Specifications See page 10.2

Fiber Bundle Detail



Distribution CableTight Buffer — Indoor Riser, Plenum & LSZH Rated (*continued*)

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

Distribution Cable Series**Riser (NEC/CEC OFNR/OFN FT4)**

2	M9B037	M9A037	M9C037	M9W037	0.184	4.67	13	19	180	801
4	M9B038	M9A038	M9C038	M9W038	0.200	5.08	16	24	195	867
6	M9B039	M9A039	M9C039	M9W039	0.220	5.59	19	28	270	1201
8	M9B040	M9A040	M9C040	M9W040	0.235	5.97	22	33	270	1201
12	M9B042	M9A042	M9C042	M9W042	0.255	6.48	27	40	300	1334
24	M9B601*	M9A601*	M9C601*	M9W601*	0.325	8.26	42	63	390	1735
24	M9B602	M9A602	M9C602	M9W602	0.496	12.60	83	124	960	4270
36	M9B604	M9A604	M9C604	M9W604	0.644	16.36	137	204	1440	6405
48	M9B606	M9A606	M9C606	M9W606	0.627	15.93	131	195	945	4203
72	M9B609	M9A609	M9C609	M9W609	0.750	19.10	195	290	1350	6005
96	M9B622	M9A622	M9C622	M9W622	0.895	22.70	290	432	1983	8820
144	M9B619	M9A619	M9C619	M9W619	0.964	24.49	314	467	2745	12210

Composite Riser Cables

6xSM/12x62.5 M96992

12xSM/12x62.5 M96963

6xSM/12x50 M96909

12xSM/12x50 M96908

Plenum (NEC/CEC OFNP/OFN FT6)

2	M9B043	M9A043	M9C043	M9W043	0.184	4.67	14	21	180	801
4	M9B044	M9A044	M9C044	M9W044	0.174	4.42	13	19	195	867
6	M9B045	M9A045	M9C045	M9W045	0.190	4.83	16	24	270	1201
8	M9B046	M9A046	M9C046	M9W046	0.222	5.64	19	28	270	1201
12	M9B048	M9A048	M9C048	M9W048	0.225	5.72	22	33	300	1334
24	M9B611*	M9A611*	M9C611*	M9W611*	0.330	8.38	40	60	390	1735
24	M9B612	M9A612	M9C612	M9W612	0.493	12.52	89	132	1263	5618
36	M9B614	M9A614	M9C614	M9W614	0.594	15.09	134	199	1913	8509
48	M9B616	M9A616	M9C616	M9W616	0.599	15.21	131	195	1245	5538
72	M9B620	M9A620	M9C620	M9W620	0.754	19.15	197	293	2093	9310
96	M9B623	M9A623	M9C623	M9W623	0.904	22.96	268	399	2160	9608
144	M9B621	M9A621	M9C621	M9W621	1.047	26.59	365	543	3645	16213

Composite Plenum Cables

6xSM/6x62.5 M97174

6xSM/12x62.5 M97041

12xSM/12x62.5 M97219

6xSM/6x50 M97412

6xSM/12x50 M97411

12xSM/12x50 M96780

LSZH (NEC/CEC OFNR/OFN FT4)

2	M9B100	M9A100	M9C100	M9W100	0.184	4.70	15	22	180	800
4	M9B101	M9A101	M9C101	M9W101	0.200	5.10	17	25	195	867
6	M9B102	M9A102	M9C102	M9W102	0.220	5.60	21	31	270	1201
8	M9B103	M9A103	M9C103	M9W103	0.235	6.00	24	36	270	1201
12	M9B104	M9A104	M9C104	M9W104	0.255	6.50	29	43	300	1334
16	M9B105	M9A105	M9C105	M9W105	0.347	8.80	43	63	315	1400
24	M9B107	M9A107	M9C107	M9W107	0.386	9.80	54	79	450	2000
36	M9B111	M9A111	M9C111	M9W111	0.798	20.00	214	313	1619	7200
48	M9B112	M9A112	M9C112	M9W112	0.835	21.20	237	347	1619	7200
72	M9B114	M9A114	M9C114	M9W114	0.883	22.40	270	395	1619	7200
96	M9B116	M9A116	M9C116	M9W116	0.973	24.70	364	532	1619	7200
144	M9B120	M9A120	M9C120	M9W120	1.087	27.60	384	561	1619	7200

All optical fiber products can be supplied in compliance with RoHS regulations. Please contact Customer Service for more details.
Construction for LSZH cables differs from the drawing. Alternative fiber counts are available.

*Single jacket design.

Breakout Style Cable

Tight Buffer — Indoor Riser, Plenum & LSZH Rated

Applications

- Low to medium fiber count requirements
- In-building backbone or horizontal deployment
- Office wiring
- Factory floor automation and harsh environment installations

Product Description

Full dielectric construction, no grounding required. Available with 2 to 36 fibers. Fiber subunits are color coded for easy identification. Length markings in meters for easy determination of cable length. For Riser offering, MSHA approved cables are available.

Outer Jacket Material

Riser & Plenum	PVC
Plenum	PVDF
Low Smoke Zero Halogen	LSZH

Sub-unit Jacket Material

Riser & Plenum	PVC
Low Smoke Zero Halogen	LSZH

Tight Buffer

Riser & Plenum	PVC
Low Smoke Zero Halogen	LSZH

Strength Member

Aramid Yarn

Color Code (Tight Buffer) Per EIA/TIA 598-A, see page 10.2

Jacket Color

Single-mode	Yellow
62.5/125 μ m	Orange (Green for LSZH only)
50/125 μ m / 1 Gbe	Orange
50/125 μ m / 10 Gbe	Aqua

Ratings

Riser

UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	UL 1666

Plenum

UL Type	OFNP
cUL Type	OFN FT6
Flame Resistance	NFPA 262

Low Smoke Zero Halogen

UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	UL 1666

Specifications

Temperature Range

Storage	-40 to +80°C
Operating	-20 to +70°C

Crush Resistance (EIA-455-41) 2000 N/cm

Impact Resistance (EIA-455-25) 2000 Impacts @ 1.6 N-m

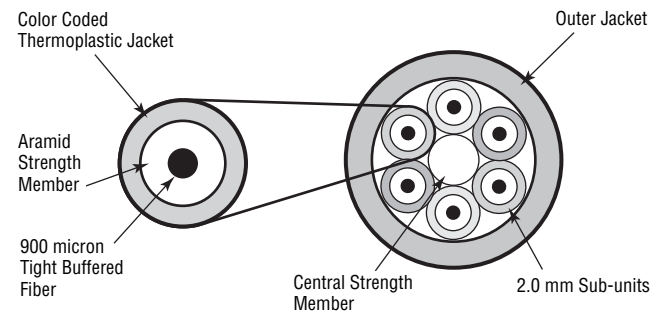
Cyclic Flexing (EIA-455-104) 2000 cycles, min.

Min. Bend Radius

Installation	15 x OD
Long Term	10 x OD

Optical Specifications See page 10.2

Fiber Bundle Detail



Breakout Style CableTight Buffer — Indoor Riser, Plenum & LSZH Rated (*continued*)

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

Breakout Cable Series

Riser (NEC/CEC OFNR/OFN FT4)										
2	M9B005	M9A005	M9C005	M9W005	0.260	6.60	24	36	180	801
4	M9B006	M9A006	M9C006	M9W006	0.321	8.15	35	52	345	1535
6	M9B007	M9A007	M9C007	M9W007	0.358	9.09	54	80	543	2415
8	M9B008	M9A008	M9C008	M9W008	0.405	10.29	69	103	600	2700
10	M9B009	M9A009	M9C009	M9W009	0.455	11.56	86	128	600	2700
12	M9B010	M9A010	M9C010	M9W010	0.514	13.06	110	164	600	2700
18	M9B011	M9A011	M9C011	M9W011	0.520	13.21	104	155	600	2700
24	M9B012	M9A012	M9C012	M9W012	0.590	14.99	135	201	600	2700
36	M9B083	M9A083	M9C083	M9W083	0.680	17.27	168	250	600	2700
Plenum (NEC/CEC OFNP/OFN FT6)										
2	M9B013	M9A013	M9C013	M9W013	0.230	5.84	20	30	180	801
4	M9B014	M9A014	M9C014	M9W014	0.263	6.68	30	45	345	1535
6	M9B015	M9A015	M9C015	M9W015	0.309	7.85	41	61	465	2068
8	M9B016	M9A016	M9C016	M9W016	0.336	8.53	55	82	600	2700
10	M9B017	M9A017	M9C017	M9W017	0.385	9.78	73	109	600	2700
12	M9B018	M9A018	M9C018	M9W018	0.391	9.93	65	97	600	2700
18	M9B019	M9A019	M9C019	M9W019	0.456	11.58	89	132	600	2700
24	M9B020	M9A020	M9C020	M9W020	0.544	13.82	117	174	600	2700
36	M9B082	M9A082	M9C082	M9W082	0.612	15.54	154	229	600	2700
LSZH (NEC/CEC OFNR/OFN FT4)										
2	M9B130	M9A130	M9C130	M9W130	0.290	7.37	39	57	270	1200
4	M9B131	M9A131	M9C131	M9W131	0.351	8.92	38	55	285	1268
6	M9B132	M9A132	M9C132	M9W132	0.358	9.09	52	76	543	2415
8	M9B133	M9A133	M9C133	M9W133	0.405	10.29	67	98	600	2700
10	M9B134	M9A134	M9C134	M9W134	0.455	11.56	110	162	600	2700
12	M9B135	M9A135	M9C135	M9W135	0.514	13.06	110	161	600	2700
18	M9B136	M9A136	M9C136	M9W136	0.520	13.21	103	151	600	2700
24	M9B137	M9A137	M9C137	M9W137	0.590	14.99	138	202	600	2700
36	M9B138	M9A138	M9C138	M9W138	0.680	17.27	171	250	600	2700

All optical fiber products can be supplied in compliance with RoHS regulations. Please contact Customer Service for more details.
2.5 mm Breakout Cables are also available.

Industrial Armored Cable

Tight Buffer — Riser & Plenum Rated

Applications

- Industrial environments
- Rugged installations
- Manufacturing plants
- Mining operations
- Telecommunications and data trunk
- Inter- and intra-building installations

Product Description

Heavy duty construction with interlocking aluminum armor (steel available on request) provides excellent mechanical protection from cutting or crushing and eliminates need for innerduct. Rodent resistant. Also available for outside plant. Loose tube design available on request.

Jacket Material	Riser & Plenum	PVC
Buffer Tube		PVC
Strength Member		Aramid Yarn
Central Strength Member		E-Glass
Armor		Aluminum
Color Code (Buffer)		Per EIA/TIA 598-A, see page 10.2
Jacket Color	Single-mode 62.5/125 μm 50/125 μm / 1 Gbe 50/125 μm / 10 Gbe	Yellow Orange Orange Aqua

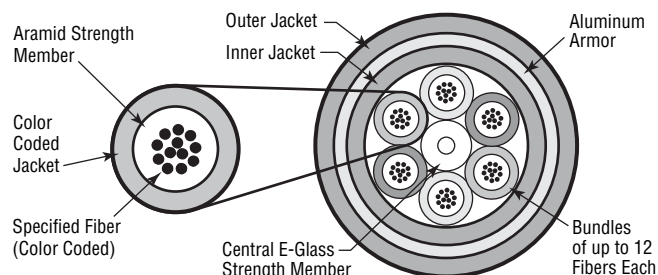
Ratings

Riser	UL Type	OFRC
	cUL Type	OFC FT4
	Flame Resistance	UL 1666
Plenum	UL Type	OFCP
	cUL Type	OFC FT6
	Flame Resistance	NFPA 262

Specifications

Temperature Range	Storage	-40 to +70°C
	Operating	-20 to +70°C
Crush Resistance (EIA-455-41)		2000 N/cm
Impact Resistance (EIA-455-25)		2000 Impacts @ 3.0 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	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

Industrial Armored Series

Riser (NEC/CEC OFCR/OFC FT4)										
6	M9B230	M9A230	M9C230	M9W230	0.570	14.50	126	188	270	1201
12	M9B231	M9A231	M9C231	M9W231	0.620	15.70	149	222	300	1334
24	M9B232*	M9A232*	M9C232*	M9W232*	0.670	17.00	179	266	390	1735
24	M9B233	M9A233	M9C233	M9W233	0.845	21.46	263	391	600	2700
36	M9B234	M9A234	M9C234	M9W234	0.970	24.64	368	548	600	2700
48	M9B235	M9A235	M9C235	M9W235	0.970	24.64	368	548	600	2700
72	M9B236	M9A236	M9C236	M9W236	1.095	27.82	481	716	600	2700
96	M9B237	M9A237	M9C237	M9W237	1.245	31.62	625	930	600	2700
144	M9B238	M9A238	M9C238	M9W238	1.320	33.55	675	1005	600	2700
Plenum (NEC/CEC OFCP/OFC FT6)										
6	M9B240	M9A240	M9C240	M9W240	0.471	12.00	87	129	270	1201
12	M9B241	M9A241	M9C241	M9W241	0.506	12.90	103	153	300	1334
24	M9B242*	M9A242*	M9C242*	M9W242*	0.631	16.00	151	225	390	1735
24	M9B243	M9A243	M9C243	M9W243	0.781	19.84	289	430	600	2700
36	M9B244	M9A244	M9C244	M9W244	0.881	22.38	309	460	600	2700
48	M9B245	M9A245	M9C245	M9W245	0.906	23.01	320	476	600	2700
72	M9B246	M9A246	M9C246	M9W246	1.056	26.82	451	671	600	2700
96	M9B247	M9A247	M9C247	M9W247	1.256	31.90	608	905	600	2700
144	M9B248	M9A248	M9C248	M9W248	1.331	33.81	687	1022	600	2700

Additional optical fiber cable constructions are available upon request. All optical fiber products can be supplied in compliance with RoHS regulations. Please contact Customer Service for more details.

*Single jacket design.

Ribbon Cable

Riser and Plenum Rated

Applications

- Inter-equipment connections
- NEBS applications

Product Description

Small size is ideal for connections in tight spaces. Color coded fibers. Suitable for use with standard ribbon connectors. Flexible, with half-inch minimum bend radius. Tight center-to-center tolerances. Optional identification printing available.

Jacket Material	PVC
Strength Member	Aramid Yarn
Color Code (Jacket & Fibers)	Per EIA/TIA 598-A, see page 10.2
Jacket Color	
Single-mode	Yellow
62.5/125µm	Orange
50/125 µm / 1 Gbe	Orange
50/125 µm / 10 Gbe	Aqua

Ratings

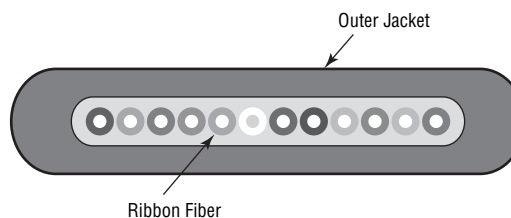
Riser	
UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	UL 1666

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

Specifications

Temperature Range	
Storage	-40 to +80°C
Operating	-20 to +70°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	15 x OD
Long Term	10 x OD
Optical Specifications	See page 10.2

Fiber Bundle Detail



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

Ribbon Series

Riser (NEC/CEC OFNR/OFN FT4)										
2	M9B630	M9A630	M9C630	M9W630	0.114	2.9	5	7	100	444
4	M9B631	M9A631	M9C631	M9W631	0.78 x 0.115	2.0 x 2.9	4	6	100	444
6	M9B632	M9A632	M9C632	M9W632	0.78 x 0.137	2.0 x 3.5	6	9	100	444
8	M9B633	M9A633	M9C633	M9W633	0.78 x 0.158	2.0 x 4.0	6	9	100	444
12	M9B634	M9A634	M9C634	M9W634	0.78 x 0.180	2.0 x 4.6	7	10	100	444
Plenum (NEC/CEC OFNP/OFN FT6)										
2	M9B640	M9A640	M9C640	M9W640	0.114	2.9	5	7	100	444
4	M9B641	M9A641	M9C641	M9W641	0.78 x 0.115	2.0 x 2.9	4	6	100	444
6	M9B642	M9A642	M9C642	M9W642	0.78 x 0.137	2.0 x 3.5	6	9	100	444
8	M9B643	M9A643	M9C643	M9W643	0.78 x 0.158	2.0 x 4.0	6	9	100	444
12	M9B644	M9A644	M9C644	M9W644	0.78 x 0.180	2.0 x 4.6	7	10	100	444

Fiber Ribbon Cable is to be sold as bulk cable and has not been qualified for field connectorization.

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

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

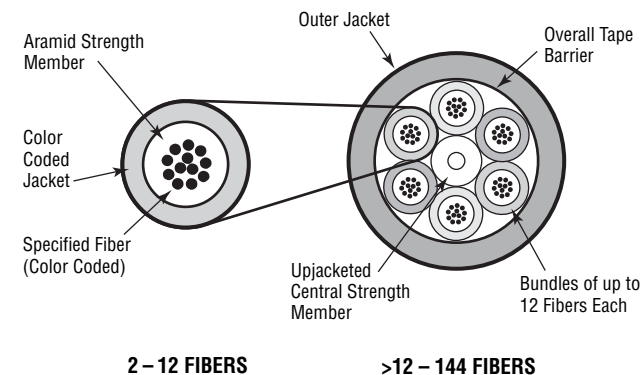
Ratings

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.

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