

# COMPONENT SPECIFICATIONS

## 2-12 SSF™ Multimode OM4, 3.0mm Distribution Riser / Plenum / LSZH Cables



Type OM4, OFNR, CSA FT4 / OFNP, CSA FT6 / LSZH

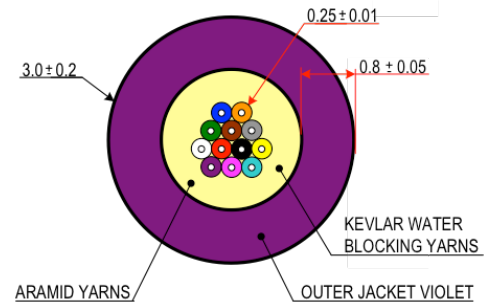
Cleerline SSF™ advanced optical glass fibers are much stronger, safer, and faster terminating than typical fibers. This distribution style cable provides the ultimate in durability and bend in a very compact size. SSF™ fibers are always protected at the glass level as a result of their integral polymeric coating, increasing both bend and tensile strength to unprecedented levels. Cleerline SSF™ fibers are compatible with all common connector systems on the market for standard 50/125 multimode and 9/125 Singlemode fibers.

### Features And Benefits:

- \* High mechanical strength and superior fatigue & durability
- \* Integral coating eliminates stripping, provides glass protection
- \* 10,000x the bend of standard fiber, Fatigue constant (Nd) > 30
- \* Increased safety factor due to the incredible bend insensitivity
- \* Glass fiber remains protected at all times from the elements
- \* Simplified termination process designed for ease of use
- \* Ultra low Attenuation loss on tight bend radius
- \* Exclusive 250um Soft peel jacket identifier

### Typical Cross Section

Part: 12D50125MOM4x



## CONSTRUCTION

### FIBER

Fiber Count = 2-12  
50/125 Multimode OM4  
250um "Soft Peel" S-Type coating  
Color Coding per TIA/EIA 568C

### JACKET

Riser Rated PVC / Plenum Rated PVC + UV / LSZH  
3.0 mm unit diameter  
Violet jacket = Multimode fiber OM4  
Sequential footage markings  
Kevlar (Plenum/LSZH + water blocking yarns)

### PHYSICAL DATA

Storage Temperature Range	= -40°C to +85 °C
Operating Temperature Range	= -20°C to +75 °C
Max Tensile Load for Installation	= 1000(225) N (lbf)
Max Tensile Load Long term	= 500(112) N (lbf)
Min. Bend Radius, Unloaded	= 1 x OD (1 x 3.0mm)
Cable Outside Diameter, Nominal	= 3.0mm
Cable Package*	= 1000ft/304.8m Reel*

\*Or customer request, spooled

Rating	= FT4-Riser / FT6-Plenum / LSZH
Crush Resistance (TIA/EIA 455-41A)	= 100 kgf/mm
Impact Resistance (TIA/EIA 455-25B)	= 1500 Impact cycles
Flexing @ 90 degree (TIA/EIA 455-104A)	= 2000 flexing cycles

### APPLICATIONS

Inter-building and intra-building voice or data communication backbones requiring 3.0mm jacket diameter. Install in ducts, underground conduits or aerial/lashed Light weight ultra flexible design simplifies installation. Fiber-to-the-Desk (FTTD). Fiber-to-the-Home (FTTH). UL listed type OFNP for installation in ducts, plenums and other spaces used as environmental air returns when installed in accordance with NEC article 770-51 (a) and 770-53(a)

### ENVIRONMENTAL CHARACTERISTICS

Temperature Dependence at 850 nm and 1300 nm	≤ 0.05 (dB/km)
Induced Attenuation - 60°C to +85°C	
Watersoak Dependence at 850 nm and 1300 nm	≤ 0.05 (dB/km)
Induced Attenuation at 20°C for 30 days	
Damp Heat Dependence at 850 nm and 1300 nm	≤ 0.05 (dB/km)
Induced Attenuation at 85°C, 85%RH., 30 days	
Dry Heat Dependence at 850 nm and 1300 nm	≤ 0.05 (dB/km)
Induced Attenuation at 85°C., 30 days	

## PRODUCT DETAIL

Cleerline SSF™ 2-12 strand fiber Micro Distribution cable is composed of a distribution style cable with an overall 3.0mm jacket. Utilizing SSF™ fiber allows for incredible strength and durability in such a small cable package. Flex tested to 2000 cycles, Impact to 1500 cycles and crush to 100 kgf/mm. SSF™ allows for ease of installation, safety, and reliability in all installation applications for the ultimate in connectivity.

SSF™ conforms to the requirement of IEC 60793-2-10 A1a.3, ISO/IEC 11801 & ITU-T G.651.1. 850 nm Laser-Optimized 50 µm core multimode fiber for 10 Gb/s & above applications

### OPTICAL CHARACTERISTICS\*

Attenuation Coefficient	850 nm	≤ 3.0 (dB/km)
	1300 nm	≤ 1.0 (dB/km)
Numerical Aperture		0.200 ± 0.015
Overfilled Modal Bandwidth	850 nm	≥ 1500 (MHz · km)
	1300 nm	≥ 500 (MHz · km)
High Performance EMB	850nm	≥ 2000 (MHz · km)

### BACKSCATTER CHARACTERISTICS

Attenuation Directional Uniformity	≤ 0.05 (dB/km)	
Attenuation Uniformity	≤ 0.05 (dB)	
Group Index of Refraction	850 nm	1.481
	1300 nm	1.476

### PHYSICAL CHARACTERISTICS

Core Diameter	50.0 ± 2.5(µm)
Core Non-circularity	≤ 6 (%)
Core / Hybrid Cladding Concentricity Error	≤ 3.0 (µm)
Hybrid Cladding Diameter	125 ± 0.7 (µm)
Hybrid Cladding Non-Circularity Error	≤ 3.0 (%)
Soft Peel Jacket Identifier Diameter	250 ± 0.7 (µm)
Coating Strip Force	100 (g)
Fiber Curl	≤ 2 (m)
Dynamic Fatigue Constant (Nd)	> 30
Proof Test	100 (kpsi)
Bend Induced Attenuation at 1300 nm (100 turns around a mandrel of 75 mm diameter)	≤ 1.0 (dB)
Dynamic fatigue 23C, 41%RH	> 30(nd)
Length	1.0 - 8.8 (Km)

### COMPLIANCE

ETL Listed Type OFNR, CSA FT4, IECA S-83-596 & OFNP, CSA FT6, or LSZH-non ETL/ IECA S-104-696. GR-409  
RoHS Compliant Directive 2011/65/EU



CABLE CHARACTERISTICS	
Fiber Count	2-12
Outer Jacket Material	Riser / Plenum / LSZH
Sub Units	None
Stress Member	Kevlar
Fiber colors	1-12 per TIA/EIA
Jacket Color	Magenta = OM4

PHYSICAL CHARACTERISTICS	VALUE
Nominal Outer Diameter (mm) 2-12	3.0
Weight strand count 2 / 4 / 6 / 8 / 12	2.8 / 3.0 / 3.0 / 4.0 / 5.0 kg/kft
Minimum Bend Radius, Unloaded	10 x OD (10 x 3mm)
Minimum Bend Radius, Operation (cm)	2.95

PART NUMBERS			
Fiber Count	Riser	Plenum	LSZH
2	2D50125MOM4R	2D50125MOM4P	2D50125MOM4L
4	4D50125MOM4R	4D50125MOM4P	4D50125MOM4L
6	6D50125MOM4R	6D50125MOM4P	6D50125MOM4L
8	8D50125MOM4R	8D50125MOM4P	8D50125MOM4L
12	12D50125MOM4R	12D50125MOM4P	12D50125MOM4L