

# FIBER OPTIC PRODUCTS



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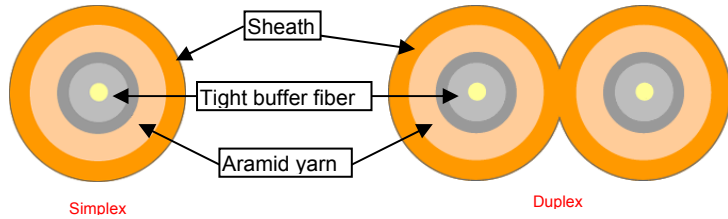
## ➤ In-door Simplex & Duplex Optical Fiber Cables

### Application:

The interconnected cable contains double tight buffered fibers that are used as ideal cables of fiber to the workstation, patch cable in the closet, pigtails, patch cord, closet to the fetching port, fetching port to transceiver with their flexible tight buffer and high tensile aramid yarns armored.

### Features:

- Small bending radius, light weight.
- High flexible, small coiling trail.
- Easy to install and terminate.
- Cable sheath: LSZH standard (PVC on request)
- Directly terminated with standard connectors with physical protection.



Cable Data:		Simplex		Duplex		
Fiber Count		2.0	3.0	1.6*3.3	2.0*4.1	2.8*5.7
Outer Diameter D*H(mm)		2.0	3.0	1.6*3.3	2.0*4.1	2.8*5.7
Nominal Weight (kg/km)		3.5	6.8	5.7	8.2	13.2
Max. Tensile strength (N)	Short-term	100N	150N	160N	200N	300N
	Long-term	60N	80N	80N	100N	160N
Max. Crushing Resistance	Short-term	1000N/100mm <sup>2</sup>				
	Long-term	300N/100mm <sup>2</sup>				
Min. Bending Radius (mm)	Dynamic	20D mm				
	Static	10D mm				
Tight buffered characteristic		OD:0.87±0.05mm, Thickness: 0.31±0.02mm				
Temperature Range (°C)		-20 °C - +70 °C				

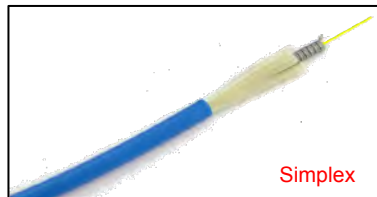
### Ordering Information:

ITEM	SM 9/125 (G.652.B)	SM 9/125 (G.652.D)	SM 9/125 (G.655)	SM 9/125 (G.656)	SM 9/125 (G.657.A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
Sheath Color	Yellow	Yellow	Yellow	Yellow	Yellow	Orange	Aqua	Orange
Simplex 2.0 mm	NB-FOCA-073	NB-FOCA-073-52D	NB-FOCA-073-655	NB-FOCA-073-656	NB-FOCA-073-57A	NB-FOCA-075	NB-FOCA-075-OM3	NB-FOCA-074
Simplex 3.0 mm	NB-FOCA-004	NB-FOCA-004-52D	NB-FOCA-004-655	NB-FOCA-004-656	NB-FOCA-004-57A	NB-FOCA-006	NB-FOCA-006-OM3	NB-FOCA-005
Duplex 1.6x3.3 mm	NB-FOCA-107	NB-FOCA-107-52D	NB-FOCA-107-655	NB-FOCA-107-656	NB-FOCA-107-57A	NB-FOCA-108	NB-FOCA-108-OM3	NB-FOCA-109
Duplex 2.0x4.1mm	NB-FOCA-070	NB-FOCA-070-52D	NB-FOCA-070-655	NB-FOCA-070-656	NB-FOCA-070-57A	NB-FOCA-071	NB-FOCA-071-OM3	NB-FOCA-072
Duplex 2.8x5.7mm	NB-FOCA-001	NB-FOCA-001-52D	NB-FOCA-001-655	NB-FOCA-001-656	NB-FOCA-001-57A	NB-FOCA-002	NB-FOCA-002-OM3	NB-FOCA-003

## ➤ Ruggedized In-door Simplex & Duplex Optical Fiber Cables

### Features:

- SUS flexible armored tube keeps the fiber protected from damage
- Resisting the destroy caused by harsh environment & improper operation such as pull strength pressing, bending, improper twisting and bite of ants or mice
- Secure transmission power to avoid additional attenuation in case of bending, bundling, and heavy load.
- Easy and quick for replacement
- Cable sheath: LSZH standard (PVC on request)
- RoHS
- 3.0mm Outer Jacket diameter



Cable Data:		Simplex		Duplex	
Fiber Count		3.0	5.7		
Outer Diameter D*H(mm)		3.0	5.7		
Nominal Weight (kg/km)		20.0	38.0		
Max. Tensile strength (N)		200			
Max. Crushing Resistance		3000 N/100mm <sup>2</sup>			
Min. Bending Radius (mm)		25D mm			
Tight buffered characteristic		OD:0.87±0.05mm, Thickness: 0.31±0.02mm			
Temperature Range (°C)		-40 °C - +85 °C			

### Ordering Information:

ITEM	SM 9/125(G.652.B)	SM 9/125 (G.652.D)	SM 9/125 (G.655)	SM 9/125 (G.656)	SM 9/125 (G.657.A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
Sheath Color	Blue	Blue	Blue	Blue	Blue	Blue	Aqua	Blue
Simplex 3.0 mm	NB-FOCA-004-RGD	NB-FOCA-004-RGD-52D	NB-FOCA-004-RGD-655	NB-FOCA-004-RGD-656	NB-FOCA-004-RGD-57A	NB-FOCA-RGD-006	NB-FOCA-006-RGD-OM3	NB-FOCA-005-RGD
Duplex 5.7mm	NB-FOCA-001-RGD	NB-FOCA-001-RGD-52D	NB-FOCA-001-RGD-655	NB-FOCA-001-RGD-656	NB-FOCA-001-RGD-57A	NB-FOCA-002-RGD	NB-FOCA-002-RGD-OM3	NB-FOCA-003-RGD

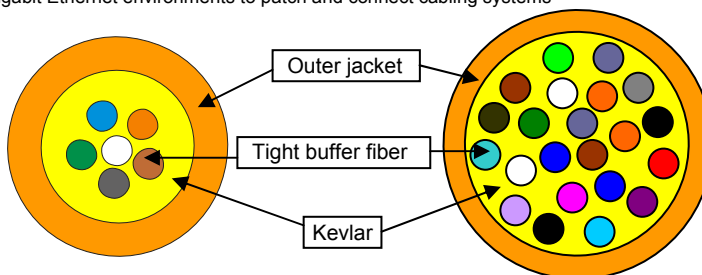
## ➤ In-door Distribution-Style Tight buffered Optical Fiber Cables

### Application:

- These cables contains multiple tight buffers that are used as distribution cables of entrance equipment, equipment room, computer room to the closet, especially suitable for horizontal installation in building. Used in gigabit & multi-gigabit Ethernet environments to patch and connect cabling systems

### Features:

- Up to 24 tight buffer Fibers
- Small bending radius, light weight.
- Metal free construction makes it immune to radio interference and electromagnetic interference.
- High flexible, small coiling trail.
- Easy to install and terminate.
- Cable sheath: LSZH standard (PVC on request)



Cable Data:						
Fiber Count		4	6	8	12	24
Outer Diameter D*H(mm)		4.8 ±0.2	5.2 ±0.2	6.2 ±0.2	6.8 ±0.3	8.4 ±0.5
Nominal Weight (kg/km)		18	23	29	37	61
Max. Tensile strength (N)	Short-term	270N	330N	480N	600N	720N
	Long-term	90N	110N	160N	200N	240N
Max. Crushing Resistance	Short-term	1000N/100mm <sup>2</sup>				
	Long-term	300N/100mm <sup>2</sup>				
Min. Bending Radius (mm)	Dynamic	20D mm				
	Static	10D mm				
Tight buffered characteristic		OD:0.87±0.05mm, Thickness: 0.31±0.02mm				
Temperature Range (°C)		-20 °C - +70 °C				

### Ordering Information:

ITEM	SM 9/125 (G.652.B)	SM 9/125 (G.652.D)	SM 9/125 (G.655)	SM 9/125 (G.656)	SM 9/125 (G.657.A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
Sheath Color	Yellow	Yellow	Yellow	Yellow	Yellow	Orange	Aqua	Orange
4C (LSZH)	NB-FOCA-007	NB-FOCA-007-52D	NB-FOCA-007-655	NB-FOCA-007-656	NB-FOCA-007-57A	NB-FOCA-008	NB-FOCA-116	NB-FOCA-009
6C (LSZH)	NB-FOCA-011	NB-FOCA-011-52D	NB-FOCA-011-655	NB-FOCA-011-656	NB-FOCA-011-57A	NB-FOCA-012	NB-FOCA-078	NB-FOCA-013
8C (LSZH)	NB-FOCA-014	NB-FOCA-014-52D	NB-FOCA-014-655	NB-FOCA-014-656	NB-FOCA-014-57A	NB-FOCA-015	NB-FOCA-093	NB-FOCA-016
12C (LSZH)	NB-FOCA-017	NB-FOCA-017-52D	NB-FOCA-017-655	NB-FOCA-017-656	NB-FOCA-017-57A	NB-FOCA-018	NB-FOCA-079	NB-FOCA-019
24C (LSZH)	NB-FOCA-020	NB-FOCA-020-52D	NB-FOCA-020-655	NB-FOCA-020-656	NB-FOCA-020-57A	NB-FOCA-021	NB-FOCA-080	NB-FOCA-022

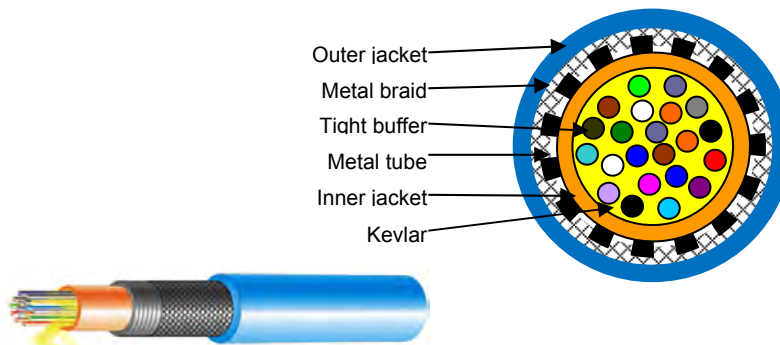
## ➤ Ruggedized Distribution-Style Tight buffered Optical Fiber Cables

### Application:

- Ideal for use in vertical cabling of buildings and LAN
- Ideal for use in tails of backbone network, and connect from outdoors to indoors directly

### Features:

- Up to 12 0.9mm Tight buffer
- Convenience for connection and construction
- High intensity and light weight
- Cable sheath: LSZH standard (PVC on request)
- Provide UV protection, waterproof, mouse-biting proof and mould proof, no cleft under stress, adapt to the environment for high fire rating



Cable Data:					
Fiber Count		4	6	8	12
Outer Diameter D*H(mm)		6.4 ±0.1	6.4 ±0.1	7.4 ±0.1	7.4 ±0.1
Nominal Weight (kg/km)		65	65	75	75
Max. Tensile strength (N)		800N			
Max. Crushing Resistance		3000N/100mm <sup>2</sup>			
Min. Bending Radius (mm)		65	65	75	75
Tight buffered characteristic		OD:0.87±0.05mm, Thickness: 0.31±0.02mm			
Temperature Range (°C)		-40 °C - +85 °C			

### Ordering Information:

ITEM	SM 9/125 (G.652.B)	SM 9/125 (G.652.D)	SM 9/125 (G.655)	SM 9/125 (G.656)	SM 9/125 (G.657.A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
Sheath Color	Blue	Blue	Blue	Blue	Blue	Blue	Aqua	Blue
4C (LSZH)	NB-FOCA-007-RGD	NB-FOCA-007-RGD-52D	NB-FOCA-007-RGD-655	NB-FOCA-007-RGD-656	NB-FOCA-007-RGD-57A	NB-FOCA-008-RGD	NB-FOCA-116-RGD-OM3	NB-FOCA-009-RGD
6C (LSZH)	NB-FOCA-011-RGD	NB-FOCA-011-RGD-52D	NB-FOCA-011-RGD-655	NB-FOCA-011-RGD-656	NB-FOCA-011-RGD-57A	NB-FOCA-012-RGD	NB-FOCA-078-RGD-OM3	NB-FOCA-013-RGD
8C (LSZH)	NB-FOCA-014-RGD	NB-FOCA-014-RGD-52D	NB-FOCA-014-RGD-655	NB-FOCA-014-RGD-656	NB-FOCA-014-RGD-57A	NB-FOCA-015-RGD	NB-FOCA-093-RGD-OM3	NB-FOCA-016-RGD
12C (LSZH)	NB-FOCA-017-RGD	NB-FOCA-017-RGD-52D	NB-FOCA-017-RGD-655	NB-FOCA-017-RGD-656	NB-FOCA-017-RGD-57A	NB-FOCA-018-RGD	NB-FOCA-079-RGD-OM3	NB-FOCA-019-RGD

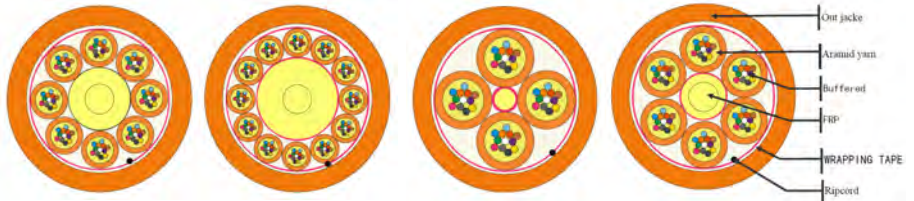
## ➤ In-door fan-out (Subgroup) Tight buffered Optical Fiber Cables

### Application:

These cables contain multiple distribution cables (subgroup) that are suitable for vertical installation in building. Each subgroup distributes to different protection box of floor and applies for different working fields.

### Features:

- Up to 144 tight buffer fibers
- Metal free construction makes it immune to radio interference and electromagnetic interference.
- Aramid yarn for round strength
- Easy to install and terminate.
- LSZH outer sheath (PVC on request).
- Easy splicing.
- Central strength member: FRP



Cable Data:		24Core (4 unit)	36Core (4 unit)	48Core (6 unit)	72Core (6 unit)	96Core (6 unit)	108Core (6 unit)	144Core (12 unit)
Fiber Count		24Core (4 unit)	36Core (4 unit)	48Core (6 unit)	72Core (6 unit)	96Core (6 unit)	108Core (6 unit)	144Core (12 unit)
Outer Diameter (mm)		15.5 ±0.8	18.8 ±0.8	20.0 ±0.8	21.0 ±0.8	25.8 ±0.8	26.2 ±0.8	28.2 ±0.8
Nominal Weight (kg/km)		182	245	305	328	500	545	699
Max. Tensile strength (N)	Short-term	1000	1200	2000	2500	3000	3000	4000
	Long-term	400	480	800	1000	1200	1200	1600
Max. Crushing Resistance	Short-term	1000N/100mm <sup>2</sup>						
	Long-term	300N/100mm <sup>2</sup>						
Min. Bending Radius (mm)	Dynamic	20D mm						
	Static	10D mm						
Tight buffered characteristic		OD:0.75±0.05mm						
Temperature Range Storage/Operation (°C)		-20 °C - +60 °C						

### Ordering Information:

ITEM	SM 9/125 (G.652.B)	SM 9/125 (G.652.D)	SM 9/125 (G.655)	SM 9/125 (G.656)	SM 9/125 (G.657.A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
Sheath Color	Yellow	Yellow	Yellow	Yellow	Yellow	Orange	Aqua	Orange
24Core	NB-FOCA-152	NB-FOCA-152-52D	NB-FOCA-152-655	NB-FOCA-152-656	NB-FOCA-152-57A	NB-FOCA-153	NB-FOCA-153-OM3	NB-FOCA-154
36Core	NB-FOCA-110	NB-FOCA-110-52D	NB-FOCA-110-655	NB-FOCA-110-656	NB-FOCA-110-57A	NB-FOCA-111	NB-FOCA-111-OM3	NB-FOCA-112
48Core	NB-FOCA-113	NB-FOCA-113-52D	NB-FOCA-113-655	NB-FOCA-113-656	NB-FOCA-113-57A	NB-FOCA-114	NB-FOCA-114-OM3	NB-FOCA-115
72Core	NB-FOCA-142	NB-FOCA-142-52D	NB-FOCA-142-655	NB-FOCA-142-656	NB-FOCA-142-57A	NB-FOCA-143	NB-FOCA-143-OM3	NB-FOCA-144
96Core	NB-FOCA-145	NB-FOCA-145-52D	NB-FOCA-145-655	NB-FOCA-145-656	NB-FOCA-145-57A	NB-FOCA-146	NB-FOCA-146-OM3	NB-FOCA-147
108Core	NB-FOCA-155	NB-FOCA-155-52D	NB-FOCA-155-655	NB-FOCA-155-656	NB-FOCA-155-57A	NB-FOCA-156	NB-FOCA-156-OM3	NB-FOCA-157
144Core	NB-FOCA-148	NB-FOCA-148-52D	NB-FOCA-148-655	NB-FOCA-148-656	NB-FOCA-148-57A	NB-FOCA-149	NB-FOCA-149-OM3	NB-FOCA-150

## ➤ Stranded Loose tube Non-Armored Duct cable (Single jacket)

### Description:

NetBox Single Jacket, Non-Armored Stranded Loose tube cables are lightweight with small diameter and designed for duct and aerial installation. The loose tube design with a metallic strength member provides stable performance over a wide range and is compatible with any telecommunication grade optical fiber.

### Features:

- The loose tube stranding technology make of the fibers have good secondary excess length and allow the fibers free movement in the tube, which keeps the fiber stress-free while the cable is subjected to longitudinal stress.
- Proven loose tube design allows for easy mid-span access and isolate fibers from installation and environmental rigors
- Dry core design for excellent water blocking performance and easier handling
- Fiber colors by IEC60304: Blue/Orange/Green/Brown/Grey/White/Red/Black/Yellow/Violet/Pink/Aqua
- Polyethylene jacket is easy to strip, rugged and durable.
- Designed in accordance with applicable industry technical specifications, standards, and references including IEC and EN

### Technical Data:

Item	Description	4 Core	96 Core	
1	Min. Bending radius (mm)	Short term (loaded): 20*OD	208	258
		Long term (Installed): 10*OD	104	129
2	Maximum tensile load (N)	2700	2700	
3	Nominal outer diameter (mm) ± 5%	10.4	12.9	
4	Nominal cable weight (Kg/Km)	95	123	
5	Crush resistance (N/10cm)	2000	2000	
6	Outer sheath	Material	MDPE	MDPE
		Thickness	1.9mm	2.0mm
7	Loose tube	Material	PBT	PBT
		Outer diameter	2.0mm	2.3mm
		Fibers/tube	4 Cores in a tube, (1)	12 Cores in a tube, (8)
8	Filler	Material	PP	PP
		No.	5	0
9	Fiber type	SM G.652D fibers	SM G.652D fibers	
10	Jelly compound	Material	Jelly	Jelly
		Outer diameter	2.2	2.3
11	Central member	Material	Steel wire	Steel wire
		Outer diameter	2.2	2.3
		Material	---	PE
12	PE Up-coated	Thickness	---	0.8
		Outer diameter	---	3.9
13	Water swellable yarn	No.	2	2
14	Rip cord	No.	2	2
15	Temperature	Operation/Storage	-40°C / 70°C	
		Installation	-20°C / 40°C	



### Ordering Information:

ITEM	SM 9/125 (G652D)
4Core	NB-FOCA-076-52D
96Core	NB-FOCA-077-52D

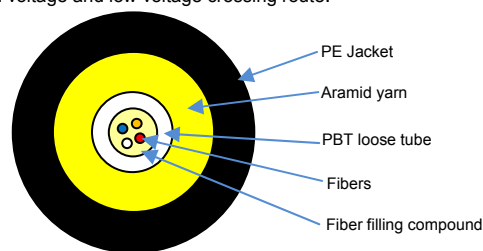
## ➤ Outdoor / Indoor Loose-Tube (Centrally Bundled) Optical Fiber Cable

### Application:

The Minicables are suitable for installation in duct & aerial environment. They are also suitable for high voltage and low voltage crossing route.

### Features:

- Up to 12 fibers
- Non metallic construction providing excellent lightning strike resistance.
- Aramid yarns armor providing excellent strain performance.
- Flexible, light weight provides ease of installation.
- Compact structure, super small outer diameter.
- Fiber protected by filling compound
- LSZH optional jacket



### Cable Data:

Fiber Count	4	6	8	12
Outer Diameter D*H(mm)	8.3 ±0.3mm			
Nominal Weight (kg/km)	42			
Temperature Range (°C)	-40 °C - +70 °C			
Jacket Material & Thickness (mm)	MDPE 1.5 mm			
PBT Loose tube outer diameter (mm)	2.15mm ±0.10mm			
Loose tube gel	Waterproof gel			
Length per drum	2km/drum			
Min. Bending Radius (mm)	Dynamic	10D mm		
	Static	15D mm		
Max. Tensile strength (N)	Short-term	1500N		
	Long-term	800N		
Max. Crushing Resistance	2000N/100mm <sup>2</sup>			

### Ordering Information:

ITEM	SM 9/125 (G.652.B)	SM 9/125 (G.652.D)	SM 9/125 (G.655)	SM 9/125 (G.656)	SM 9/125 (G.657.A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
4C	NB-FOCA-023	NB-FOCA-023-52D	NB-FOCA-023-655	NB-FOCA-023-656	NB-FOCA-023-57A	NB-FOCA-024	NB-FOCA-024-OM3	NB-FOCA-025
6C	NB-FOCA-026	NB-FOCA-026-52D	NB-FOCA-026-655	NB-FOCA-026-656	NB-FOCA-026-57A	NB-FOCA-028	NB-FOCA-028-OM3	NB-FOCA-029
8C	NB-FOCA-030	NB-FOCA-030-52D	NB-FOCA-030-655	NB-FOCA-030-656	NB-FOCA-030-57A	NB-FOCA-031	NB-FOCA-031-OM3	NB-FOCA-032
12C	NB-FOCA-033	NB-FOCA-033-52D	NB-FOCA-033-655	NB-FOCA-033-656	NB-FOCA-033-57A	NB-FOCA-034	NB-FOCA-034-OM3	NB-FOCA-035

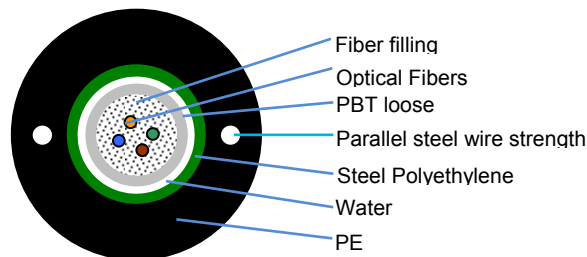
## ➤ Armoured Loose-Tube (Centrally Bundled) Outdoor Optical Fiber Cable

### Application:

These central loose tube cables are suitable for installation in Duct, Direct buried & aerial environment for long haul communication, LAN.

### Features:

- Up to 12 fibers
- Two parallel round steel wires enhance tensile strength
- Tension & crush resistance
- Good mechanical performance
- Jacket with ultra violet resistance property
- Fiber protected by filling compound
- LSZH optional jacket



### Cable Data:

Fiber Count	4	6	8	12
Outer Diameter D*H(mm)	8.3±0.3mm			9.0±0.15mm
Nominal Weight (kg/km)	66			82
Temperature Range (°C)	-40 °C - +70 °C			
Jacket Material & Thickness (mm)	MDPE 1.5 mm			
PBT Loose tube diameter (mm)	2.2mm ±0.10mm			
Loose tube gel	Waterproof gel			
Length per drum	2km/drum			
Min. Bending Radius (mm)	Dynamic	20D mm		
	Static	10D mm		
Max. Tensile strength (N)	Short-term	2700N		
	Long-term	900N		
Max. Crushing Resistance	3000N/100mm <sup>2</sup>			

### Ordering Information:

ITEM	SM 9/125 (G.652.B)	SM 9/125 (G.652.D)	SM 9/125 (G.655)	SM 9/125 (G.656)	SM 9/125 (G.657.A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
4C	NB-FOCA-045	NB-FOCA-045-52D	NB-FOCA-045-655	NB-FOCA-045-656	NB-FOCA-045-57A	NB-FOCA-046	NB-FOCA-046-OM3	NB-FOCA-047
6C	NB-FOCA-048	NB-FOCA-048-52D	NB-FOCA-048-655	NB-FOCA-048-656	NB-FOCA-048-57A	NB-FOCA-049	NB-FOCA-049-OM3	NB-FOCA-050
8C	NB-FOCA-051	NB-FOCA-051-52D	NB-FOCA-051-655	NB-FOCA-051-656	NB-FOCA-051-57A	NB-FOCA-052	NB-FOCA-052-OM3	NB-FOCA-053
12C	NB-FOCA-054	NB-FOCA-054-52D	NB-FOCA-054-655	NB-FOCA-054-656	NB-FOCA-054-57A	NB-FOCA-055	NB-FOCA-055-OM3	NB-FOCA-056

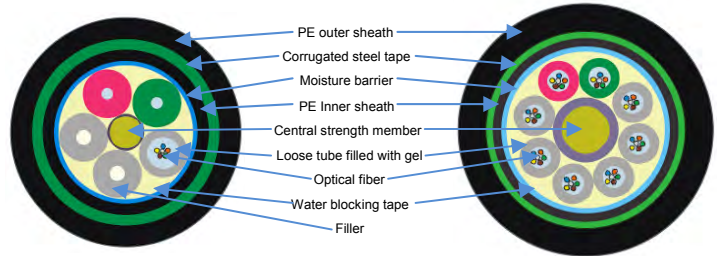
## ➤ Armored Direct Buried Double Sheath Loose Tube Optical fiber Cable

### Application:

These corrugated steel tape armored and double sheath cables are suitable for installation in harsh environments where mechanical impact on the cable is to be expected, e.g. direct buried application. They are also suitable for installation in ducts where the rodent resistance is to be expected

### Features:

- High tensile strength, good performance on mechanical stress, crush resistance, temperature and transmission.
- High Young's modulus phosphatized steel wire as central strength member, PE buffer extruded to outside of steel wire when necessary
- The loose tubes, cable core and all interstices filled with moisture-proof gel and compound, prevent water ingress longitudinally.
- The aluminum tape laminated on both sides with polyethylene and close bonded PE inner sheath possesses the function of radial moisture-proof for the cable.
- Longitudinal water blocking tape at the inner side of the steel tape tightly bonded to the MDPE sheath ensures radial moisture proof and reinforces mechanical crush resistance as well as prevents water ingress longitudinally.
- Corrugated steel tape armored and double PE sheath providing excellent crush resistance and rodent resistance.



### Cable Data:

Fiber Count		2 - 60	62 - 72	74 - 96	98 - 120	122 - 144
Outer Diameter D*H(mm)		12.0±0.5mm	13.0±0.5mm	14.0±0.5mm	16.0±0.5mm	18.5±0.5mm
No. of tubes		5	6	8	10	12
Nominal Weight (kg/km)		145	196	230	270	360
Max. Tensile strength (N)	Short-term	3000	3000	3000	3000	3000
	Long-term	1000	1000	1000	1000	1000
Max. Crushing Resistance N/100mm <sup>2</sup>	Short-term	3000	3000	3000	3000	3000
	Long-term	1000	1000	1000	1000	1000
Min. Bending Radius (mm)	Dynamic	25D				
	Static	12.5D				
Fiber Identification		Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua				
Armouring		Armoured steel tape (thickness: 1.5mm)				
Central strength member		Steel wire				
Alluminium moisture barrier		Yes				
Loose tubes		PBT loose tube, (Dia: 2.10mm ±0.15mm), (Nominal Thickness:0.3mm)				
Loose Tube Identification		Red, Green				
Loose Tube Gel		Asynthetic waterproof gel				
Fillers Material		Polyethylene				
Inner Sheath Material & Thickness (mm)		PE 1.0 mm				
Outer Sheath Material & Thickness (mm)		PE 1.5 mm				
Temperature Range (°C)		-40 °C - +70 °C				

### Tactic Rule for Loose Tube and Fiber:

	Number of Loose Tube											
	1	2	3	4	5	6	7	8	9	10	11	12
Fiber count	Red	Green	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature
2 ~ 12	Filler	Filler	Filler	Filler	Tube							
14 ~ 24	Filler	Filler	Filler	Tube	Tube							
26 ~ 36	Filler	Filler	Tube	Tube	Tube							
38 ~ 48	Filler	Tube	Tube	Tube	Tube							
50 ~ 60	Tube	Tube	Tube	Tube	Tube							
62 ~ 72	Tube	Tube	Tube	Tube	Tube	Tube						
74 ~ 84	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube				
86 ~ 96	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube			
98 ~ 108	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube		
110 ~ 120	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	
122 ~ 132	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube
134 ~ 144	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube

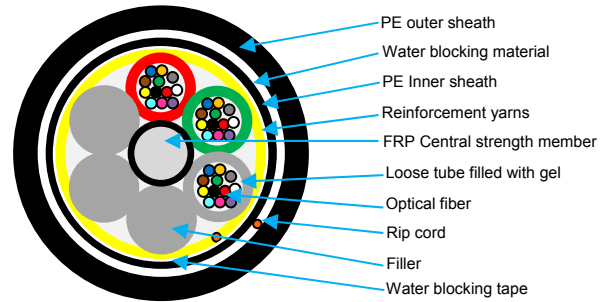
### Ordering Information:

ITEM	SM 9/125 (G652B)	SM 9/125 (G652D)	SM 9/125 (G655)	SM 9/125 (G656)	SM 9/125 (G657A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
4Core	NB-FOCA-133	NB-FOCA-133-52D	NB-FOCA-133-655	NB-FOCA-133-656	NB-FOCA-133-57A	NB-FOCA-134	NB-FOCA-134-OM3	NB-FOCA-135
6Core	NB-FOCA-136	NB-FOCA-136-52D	NB-FOCA-136-655	NB-FOCA-136-656	NB-FOCA-136-57A	NB-FOCA-137	NB-FOCA-137-OM3	NB-FOCA-138
8Core	NB-FOCA-139	NB-FOCA-139-52D	NB-FOCA-139-655	NB-FOCA-139-656	NB-FOCA-139-57A	NB-FOCA-140	NB-FOCA-140-OM3	NB-FOCA-141
12Core	NB-FOCA-094	NB-FOCA-094-52D	NB-FOCA-094-655	NB-FOCA-094-656	NB-FOCA-094-57A	NB-FOCA-095	NB-FOCA-095-OM3	NB-FOCA-096
24Core	NB-FOCA-057	NB-FOCA-057-52D	NB-FOCA-057-655	NB-FOCA-057-656	NB-FOCA-057-57A	NB-FOCA-098	NB-FOCA-098-OM3	NB-FOCA-099
36Core	NB-FOCA-087	NB-FOCA-087-52D	NB-FOCA-087-655	NB-FOCA-087-656	NB-FOCA-087-57A	NB-FOCA-088	NB-FOCA-088-OM3	NB-FOCA-089
48Core	NB-FOCA-062	NB-FOCA-062-52D	NB-FOCA-062-655	NB-FOCA-062-656	NB-FOCA-062-57A	NB-FOCA-063	NB-FOCA-063-OM3	NB-FOCA-064
72Core	NB-FOCA-090	NB-FOCA-090-52D	NB-FOCA-090-655	NB-FOCA-090-656	NB-FOCA-090-57A	NB-FOCA-091	NB-FOCA-091-OM3	NB-FOCA-092
96Core	NB-FOCA-065	NB-FOCA-065-52D	NB-FOCA-065-655	NB-FOCA-065-656	NB-FOCA-065-57A	NB-FOCA-066	NB-FOCA-066-OM3	NB-FOCA-067
144Core	NB-FOCA-068	NB-FOCA-068-52D	NB-FOCA-068-655	NB-FOCA-068-656	NB-FOCA-068-57A	NB-FOCA-119	NB-FOCA-119-OM3	NB-FOCA-120

## ➤ Outdoor Non-metallic Duct & Direct Buried Double Sheath Loose Tube Optical fiber Cable

### Features:

- Up to 144 fibers
- The loose tube stranding technology make of the fibers have good secondary excess length and allow the fibers free movement in the tube, which keeps the fiber stress-free while the cable is subjected to longitudinal stress.
- Non metallic construction providing excellent electric magnetic resistance and lightning resistance.
- Non metallic central member and yarns armored providing excellent strain performance.
- Light weight, less additional load to tower



### Cable Data:

Fiber Count	2 - 60	62 - 72	74 - 96	98 - 120	122 - 144
Outer Diameter D*H(mm)	11.5±0.5	12.5±0.5	13.5±0.5	15.5±0.5	18.5±0.5
No. of tubes	5	6	8	10	12
Nominal Weight (kg/km)	116	149	182	220	296
Max. Tensile strength (N)	Short-term	2100	3000	3000	3000
	Long-term	700	1000	1000	1000
Max. Crushing Resistance N/100mm <sup>2</sup>	Short-term	1200	1200	1200	1200
	Long-term	400	400	400	400
Min. Bending Radius (mm)	Dynamic	20D			
	Static	10D			
Fiber Identification	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua				
Central strength member	FRP				
Loose tubes	PBT loose tube, (Dia: 2.10mm ±0.15mm), (Nominal Thickness:0.3mm)				
Loose Tube Identification	Red, Green				
Loose Tube Gel	Asynthetic waterproof gel				
Fillers Material	Polyethylene				
Flooding Compound	Water proof gel				
Peripheral Strength Member	Reinforcement yarns				
Inner Sheath Material & Thickness (mm)	PE 1.0 mm				
Outer Sheath Material & Thickness (mm)	PE 1.5 mm				
Length per drum	2km/drum				
Temperature Range (°C)	-40 °C - +70 °C				

Tactic Rule for Loose Tube and Fiber:												
	Number of Loose Tube											
	1	2	3	4	5	6	7	8	9	10	11	12
Fiber count	Red	Green	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature
2 ~ 12	Filler	Filler	Filler	Filler	Tube							
14 ~ 24	Filler	Filler	Filler	Tube	Tube							
26 ~ 36	Filler	Filler	Tube	Tube	Tube							
38 ~ 48	Filler	Tube	Tube	Tube	Tube							
50 ~ 60	Tube	Tube	Tube	Tube	Tube							
62 ~ 72	Tube	Tube	Tube	Tube	Tube	Tube						
74 ~ 84	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube			
86 ~ 96	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube		
98 ~ 108	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	
110 ~ 120	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	
122 ~ 132	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube
134 ~ 144	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube

### Ordering Information:

ITEM	SM 9/125 (G652B)	SM 9/125 (G652D)	SM 9/125 (G655)	SM 9/125 (G656)	SM 9/125 (G657A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
4Core	NB-FOCA-121	NB-FOCA-121-52D	NB-FOCA-121-655	NB-FOCA-121-656	NB-FOCA-121-57A	NB-FOCA-122	NB-FOCA-122-OM3	NB-FOCA-123
6Core	NB-FOCA-124	NB-FOCA-124-52D	NB-FOCA-124-655	NB-FOCA-124-656	NB-FOCA-124-57A	NB-FOCA-125	NB-FOCA-125-OM3	NB-FOCA-126
8Core	NB-FOCA-127	NB-FOCA-127-52D	NB-FOCA-127-655	NB-FOCA-127-656	NB-FOCA-127-57A	NB-FOCA-128	NB-FOCA-128-OM3	NB-FOCA-129
12Core	NB-FOCA-100	NB-FOCA-100-52D	NB-FOCA-100-655	NB-FOCA-100-656	NB-FOCA-100-57A	NB-FOCA-101	NB-FOCA-101-OM3	NB-FOCA-102
24Core	NB-FOCA-103	NB-FOCA-103-52D	NB-FOCA-103-655	NB-FOCA-103-656	NB-FOCA-103-57A	NB-FOCA-104	NB-FOCA-104-OM3	NB-FOCA-105
36Core	NB-FOCA-081	NB-FOCA-081-52D	NB-FOCA-081-655	NB-FOCA-081-656	NB-FOCA-081-57A	NB-FOCA-082	NB-FOCA-082-OM3	NB-FOCA-083
48Core	NB-FOCA-039	NB-FOCA-039-52D	NB-FOCA-039-655	NB-FOCA-039-656	NB-FOCA-039-57A	NB-FOCA-040	NB-FOCA-040-OM3	NB-FOCA-041
72Core	NB-FOCA-084	NB-FOCA-084-52D	NB-FOCA-084-655	NB-FOCA-084-656	NB-FOCA-084-57A	NB-FOCA-085	NB-FOCA-085-OM3	NB-FOCA-086
96Core	NB-FOCA-042	NB-FOCA-042-52D	NB-FOCA-042-655	NB-FOCA-042-656	NB-FOCA-042-57A	NB-FOCA-043	NB-FOCA-043-OM3	NB-FOCA-044
144Core	NB-FOCA-130	NB-FOCA-130-52D	NB-FOCA-130-655	NB-FOCA-130-656	NB-FOCA-130-57A	NB-FOCA-131	NB-FOCA-131-OM3	NB-FOCA-132

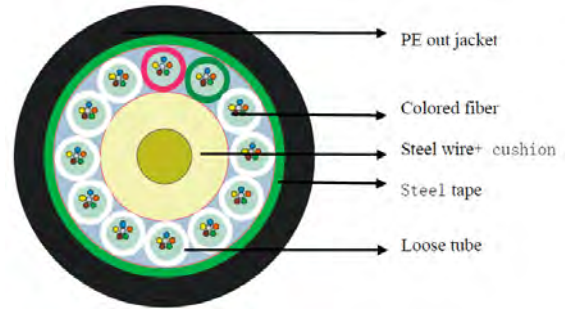
## ➤ Armored Direct Buried Single Sheath Loose Tube Optical fiber Cable

### Application:

These corrugated steel tape armored cables are suitable for installation in harsh environments where mechanical impact on the cable is to be expected, e.g. direct buried application. They are also suitable for installation in ducts where the rodent resistance is to be expected

### Features:

- Up to 144 fibers
- High Young's modulus phosphatized steel wire as central strength member
- The loose tubes, cable core and all interstices filled with moisture-proof gel and compound, prevent water ingress longitudinally.
- Longitudinal water blocking tape at the inner side of the steel tape ensures radial moisture proof and reinforces mechanical crush resistance as well as prevents water ingress longitudinally.
- Corrugated steel tape armored provide excellent crush resistance and rodent resistance.



### Cable Data:

Fiber Count	2 - 60	62 - 72	74 - 96	98 - 144
Outer Diameter D*H(mm)	10.5±0.5mm	11.5±0.5mm	13.0±0.5mm	15.8±0.5mm
No. of tubes	5	6	8	12
Nominal Weight (kg/km)	112	138	165	222
Max. Tensile strength (N)	Short-term	1500	2000	2500
	Long-term	600	600	800
Max. Crushing Resistance N/100mm <sup>2</sup>	Short-term	1000	1000	1000
	Long-term	300	300	300
Min. Bending Radius (mm)	Dynamic	25D		
	Static	12.5D		
Fiber Identification	Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua			
Armouring	coated steel tape (thickness: 1.5mm)			
Central strength member	Steel wire + cushion			
Water barrier tape	Yes			
Loose tubes	PBT loose tube, (Dia: 2.15mm ±0.05mm), (Nominal Thickness:0.3mm)			
Loose Tube Identification	Red, Green			
Loose Tube Gel	Asynthetic waterproof gel			
Fillers Material	Polyethylene			
Outer Sheath Material & Thickness (mm)	PE 1.5 mm			
Length per drum	2km/drum			
Temperature Range (°C)	-40 °C - +70 °C			

### Tactic Rule for Loose Tube and Fiber:

	Number of Loose Tube											
	1	2	3	4	5	6	7	8	9	10	11	12
Fiber count	Red	Green	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature
2 ~ 12	Filler	Filler	Filler	Filler	Tube							
14 ~ 24	Filler	Filler	Filler	Tube	Tube							
26 ~ 36	Filler	Filler	Tube	Tube	Tube							
38 ~ 48	Filler	Tube	Tube	Tube	Tube							
50 ~ 60	Tube	Tube	Tube	Tube	Tube							
62 ~ 72	Tube	Tube	Tube	Tube	Tube	Tube						
74 ~ 84	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube				
86 ~ 96	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube			
98 ~ 108	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube		
110 ~ 120	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	
122 ~ 132	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube
134 ~ 144	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube

### Ordering Information:

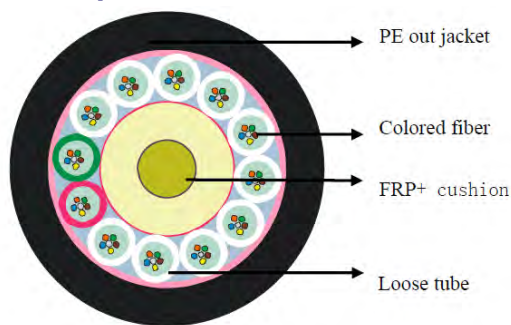
ITEM	SM 9/125 (G652B)	SM 9/125 (G652D)	SM 9/125 (G655)	SM 9/125 (G656)	SM 9/125 (G657A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
4Core	NB-FOCA-191	NB-FOCA-191-52D	NB-FOCA-191-655	NB-FOCA-191-656	NB-FOCA-191-57A	NB-FOCA-192	NB-FOCA-192-OM3	NB-FOCA-193
6Core	NB-FOCA-194	NB-FOCA-194-52D	NB-FOCA-194-655	NB-FOCA-194-656	NB-FOCA-194-57A	NB-FOCA-195	NB-FOCA-195-OM3	NB-FOCA-196
8Core	NB-FOCA-197	NB-FOCA-197-52D	NB-FOCA-197-655	NB-FOCA-197-656	NB-FOCA-197-57A	NB-FOCA-198	NB-FOCA-198-OM3	NB-FOCA-199
12Core	NB-FOCA-200	NB-FOCA-200-52D	NB-FOCA-200-655	NB-FOCA-200-656	NB-FOCA-200-57A	NB-FOCA-201	NB-FOCA-201-OM3	NB-FOCA-202
24Core	NB-FOCA-203	NB-FOCA-203-52D	NB-FOCA-203-655	NB-FOCA-203-656	NB-FOCA-203-57A	NB-FOCA-204	NB-FOCA-204-OM3	NB-FOCA-205
36Core	NB-FOCA-206	NB-FOCA-206-52D	NB-FOCA-206-655	NB-FOCA-206-656	NB-FOCA-206-57A	NB-FOCA-207	NB-FOCA-207-OM3	NB-FOCA-208
48Core	NB-FOCA-209	NB-FOCA-209-52D	NB-FOCA-209-655	NB-FOCA-209-656	NB-FOCA-209-57A	NB-FOCA-210	NB-FOCA-210-OM3	NB-FOCA-211
72Core	NB-FOCA-212	NB-FOCA-212-52D	NB-FOCA-212-655	NB-FOCA-212-656	NB-FOCA-212-57A	NB-FOCA-213	NB-FOCA-213-OM3	NB-FOCA-214
96Core	NB-FOCA-215	NB-FOCA-215-52D	NB-FOCA-215-655	NB-FOCA-215-656	NB-FOCA-215-57A	NB-FOCA-216	NB-FOCA-216-OM3	NB-FOCA-217
144Core	NB-FOCA-218	NB-FOCA-218-52D	NB-FOCA-218-655	NB-FOCA-218-656	NB-FOCA-218-57A	NB-FOCA-219	NB-FOCA-219-OM3	NB-FOCA-220



## ➤ Outdoor Non-metallic Duct Single Sheath Loose Tube Optical fiber Cable

### Features:

- Up to 144 fibers
- The loose tube stranding technology make of the fibers have good secondary excess length and allow the fibers free movement in the tube, which keeps the fiber stress-free while the cable is subjected to longitudinal stress.
- Non metallic construction providing excellent electric magnetic resistance and lightning resistance.
- Non metallic central member provide excellent strain performance.
- Light weight, less additional load to Tower



### Cable Data:

Fiber Count		2 - 60	62 - 72	74 - 96	98 - 120	122 - 144
Outer Diameter D*H(mm)		11.5±0.5	12.5±0.5	13.5±0.5	15.5±0.5	18.5±0.5
No. of tubes		5	6	8	10	12
Nominal Weight (kg/km)		116	149	182	220	296
Max. Tensile strength (N)	Short-term	2100	3000	3000	3000	3000
	Long-term	700	1000	1000	1000	1000
Max. Crushing Resistance N/100mm <sup>2</sup>	Short-term	1200	1200	1200	1200	1200
	Long-term	400	400	400	400	400
Min. Bending Radius (mm)	Dynamic	20D				
	Static	10D				
Fiber Identification		Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Pink, Aqua				
Central strength member		FRP				
Water barrier tape		Yes				
Loose tubes		PBT loose tube, (Dia: 2.10mm ±0.15mm), (Nominal Thickness:0.3mm)				
Loose Tube Identification		Red, Green				
Loose Tube Gel		Asynthetic waterproof gel				
Fillers Material		Polyethylene				
Flooding Compound		Water proof gel				
Peripheral Strength Member		Reinforcement yarns				
Inner Sheath Material & Thickness (mm)		PE 1.0 mm				
Outer Sheath Material & Thickness (mm)		PE 1.5 mm				
Length per drum		2km/drum				
Temperature Range (°C)		-40 °C - +70 °C				

### Tactic Rule for Loose Tube and Fiber:

	Number of Loose Tube											
	1	2	3	4	5	6	7	8	9	10	11	12
Fiber count	Red	Green	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature	Nature
2 ~ 12	Filler	Filler	Filler	Filler	Tube							
14 ~ 24	Filler	Filler	Filler	Tube	Tube							
26 ~ 36	Filler	Filler	Tube	Tube	Tube							
38 ~ 48	Filler	Tube	Tube	Tube	Tube							
50 ~ 60	Tube	Tube	Tube	Tube	Tube							
62 ~ 72	Tube	Tube	Tube	Tube	Tube	Tube						
74 ~ 84	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube				
86 ~ 96	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube			
98 ~ 108	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube		
110 ~ 120	Tube	Tube	Tube	Tube	ube	Tube	Tube	Tube	ube	Tube		
122 ~ 132	Filler	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube
134 ~ 144	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube	Tube

### Ordering Information:

ITEM	SM 9/125 (G652B)	SM 9/125 (G652D)	SM 9/125 (G655)	SM 9/125 (G656)	SM 9/125 (G657A)	MM 50/125	OM3 MaxBand 300	MM 62.5/125
4Core	NB-FOCA-161	NB-FOCA-161-52D	NB-FOCA-161-655	NB-FOCA-161-656	NB-FOCA-161-57A	NB-FOCA-162	NB-FOCA-162-OM3	NB-FOCA-163
6Core	NB-FOCA-164	NB-FOCA-164-52D	NB-FOCA-164-655	NB-FOCA-164-656	NB-FOCA-164-57A	NB-FOCA-165	NB-FOCA-165-OM3	NB-FOCA-166
8Core	NB-FOCA-167	NB-FOCA-167-52D	NB-FOCA-167-655	NB-FOCA-167-656	NB-FOCA-167-57A	NB-FOCA-168	NB-FOCA-168-OM3	NB-FOCA-169
12Core	NB-FOCA-170	NB-FOCA-170-52D	NB-FOCA-170-655	NB-FOCA-170-656	NB-FOCA-170-57A	NB-FOCA-171	NB-FOCA-171-OM3	NB-FOCA-172
24Core	NB-FOCA-173	NB-FOCA-173-52D	NB-FOCA-173-655	NB-FOCA-173-656	NB-FOCA-173-57A	NB-FOCA-174	NB-FOCA-174-OM3	NB-FOCA-175
36Core	NB-FOCA-176	NB-FOCA-176-52D	NB-FOCA-176-655	NB-FOCA-176-656	NB-FOCA-176-57A	NB-FOCA-177	NB-FOCA-177-OM3	NB-FOCA-178
48Core	NB-FOCA-179	NB-FOCA-179-52D	NB-FOCA-179-655	NB-FOCA-179-656	NB-FOCA-179-57A	NB-FOCA-180	NB-FOCA-180-OM3	NB-FOCA-181
72Core	NB-FOCA-182	NB-FOCA-182-52D	NB-FOCA-182-655	NB-FOCA-182-656	NB-FOCA-182-57A	NB-FOCA-183	NB-FOCA-183-OM3	NB-FOCA-184
96Core	NB-FOCA-185	NB-FOCA-185-52D	NB-FOCA-185-655	NB-FOCA-185-656	NB-FOCA-185-57A	NB-FOCA-186	NB-FOCA-186-OM3	NB-FOCA-187
144Core	NB-FOCA-188	NB-FOCA-188-52D	NB-FOCA-188-655	NB-FOCA-188-656	NB-FOCA-188-57A	NB-FOCA-189	NB-FOCA-189-OM3	NB-FOCA-190

## ➤ Bare Fibre Datasheets

### 50/125µm Graded-Index Multimode fiber

50/125µm Multimode Fibre complies with or exceeds ISO/IEC 11801 OM2 specification, IEC 60793-2-10 type A1a.1 Optical Fiber Specification and TIA/EIA-492AAAB-A detail specification.

#### Features

- Produced by the PCVD process
- Extremely refined refractive index profile
- Low attenuation
- High bandwidth at both 850nm and 1300nm wavelengths
- Coated with dual layer UV curable acrylate

#### Benefits and Applications

- Superior geometry, uniformity and purity of glass
- Local area networks (LAN)
- Video, voice and data services
- Gigabit Ethernet (IEEE 802.3z) using laser or light emitting diode (LED) sources
- Optimized performance in tight-buffer cable applications
- High resistance to micro bending
- Stable performance over a wide range of environmental conditions

### Product Specifications

#### Geometrical Characteristics

Core Diameter (µm)	50±2.5
Cladding Diameter (µm)	125.0±1.0
Cladding Non-Circularity (%)	≤1.0
Coating Diameter (µm)	245±7
Coating/Cladding Concentricity Error (µm)	≤12.0
Coating Non-Circularity (%)	≤6.0
Core/Cladding Concentricity Error (µm)	≤1.5

#### Optical Characteristics

		Class A	Class B
Attenuation (dB/km)	850nm	≤2.3	≤2.5
	1300nm	≤0.6	≤0.7
Minimum Modal Bandwidth (MHz.km)	850nm	≥600	≥500
	1300nm	≥1200	≥500
Numerical Aperture		0.200±0.015	
Group Refractive Index	850nm	1.482	
	1300nm	1.477	
Zero Dispersion Wavelength (nm)		1295-1320	
Zero Dispersion Slope (ps/(nm <sup>2</sup> .km))	1295-1300nm	≤0.001*(λ <sub>0</sub> -1190)	
	1300-1320nm	≤0.11	
Macro bending induced loss 100 turns @ 60 mm diameter	850nm	≤0.50	
	1300nm	≤0.50	

#### Backscatter Characteristics (1300nm)

Step (Mean of bidirectional measurement) (dB)	≤0.10
Irregularities over fibre length and point discontinuity (dB)	≤0.10
Attenuation uniformity (dB/km)	≤0.08

#### Environmental Characteristics (850nm & 1300nm)

Temperature dependence induced attenuation at -60°C to +85°C (dB/km)	≤0.10
Temperature-humidity cycling induced attenuation at -10°C to +85°C, 98% RH (dB/km)	≤0.10
Water soak dependence induced attenuation at 23°C for 30 days (dB/km)	≤0.10
Damp heat dependence induced attenuation at 85°C and 85% RH, for 30 days (dB/km)	≤0.10
Dry heat aging at 85°C (dB/km)	≤0.10

#### Mechanical Specification

Proof test	(N)	≥9.0
	(%)	≥1.0
	(kpsi)	≥100
Coating strip force (N)	Typical average force	1.5
	Peak force	≥1.3 ≤8.9
Dynamic stress corrosion susceptibility parameter n <sup>d</sup>		≥27

## 62.5/125µm Graded-Index Multimode fiber

62.5/125µm Multimode Fibre complies with or exceeds ISO/IEC 11801 OM1 specification, IEC 60793-2-10 type A1b Optical Fiber Specification and TIA/EIA-492AAAA-A detail specification.

### Features

- Produced by the PCVD process
- Extremely refined refractive index profile
- Low attenuation
- High bandwidth at both 850nm and 1300nm wavelengths
- Coated with dual layer UV curable acrylate

### Benefits and Applications

- Superior geometry, uniformity and purity of glass
- Local area networks (LAN)
- Video, voice and data services
- Gigabit Ethernet (IEEE 802.3z) using laser or light emitting diode (LED) sources
- Optimized performance in tight-buffer cable applications
- High resistance to micro bending
- Stable performance over a wide range of environmental conditions

## Product Specifications

### Geometrical Characteristics

Core Diameter (µm)	62.5±2.5
Cladding Diameter (µm)	125.0±1.0
Cladding Non-Circularity (%)	≤1.0
Coating Diameter (µm)	245±7
Coating/Cladding Concentricity Error (µm)	≤12.0
Coating Non-Circularity (%)	≤6.0
Core/Cladding Concentricity Error (µm)	≤1.5

### Optical Characteristics

Attenuation (dB/km)	850nm	≤2.7
	1300nm	≤0.6
Minimum Modal Bandwidth (MHz.km)	850nm	≥200
	1300nm	≥600
Numerical Aperture		0.275±0.015
Group Refractive Index	850nm	1.496
	1300nm	1.491
Zero Dispersion Wavelength (nm)		1320-1365
Zero Dispersion Slope (ps/(nm <sup>2</sup> .km))		≤0.097
Macro bending induced loss	850nm	≤0.50
	100 turns @ 60 mm diameter 1300nm	≤0.50

### Backscatter Characteristics (1300nm)

Step (Mean of bidirectional measurement) (dB)	≤0.10
Irregularities over fibre length and point discontinuity (dB)	≤0.10
Attenuation uniformity (dB/km)	≤0.10

### Environmental Characteristic (850nm & 1300nm)

Temperature dependence induced attenuation at -60°C to +85°C (dB/km)	≤0.10
Temperature-humidity cycling induced attenuation at -10°C to +85°C, 98% RH (dB/km)	≤0.10
Water soak dependence induced attenuation at 23°C for 30 days (dB/km)	≤0.10
Damp heat dependence induced attenuation at 85°C and 85% RH, for 30 days (dB/km)	≤0.10
Dry heat aging at 85°C (dB/km)	≤0.10

### Mechanical Specification

Proof test	(N)	≥9.0
	(%)	≥1.0
	(kpsi)	≥100
Coating strip force (N)	Typical average force	1.5
	Peak force	≥1.3 ≤8.9
Dynamic stress corrosion susceptibility parameter n <sup>d</sup>		≥27

## MaxBand® - OM2+/OM3/OM4 - Multimode fiber

MaxBand® - OM2+ - Multimode Fibre complies with or exceeds ISO/IEC 11801 OM2 specification, IEC 60793-2-10 type A1a.1 Optical Fiber Specification and TIA/EIA-492AAAB-A detail specification. MaxBand® - OM3/OM4 - Multimode Fibre comply with or exceeds ISO/IEC 11801 OM3/OM4 specification, IEC 60793-2-10 type A1a.2 and A1a.3 (in preparation) Optical Fiber Specification and TIA/EIA-492AAAC/492AAAD detail specification.

### Features

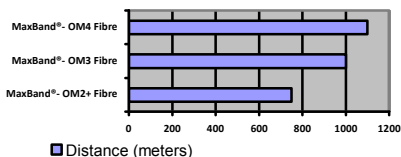
- 850nm laser-optimized
- Specially designed for 10Gb/s Ethernet applications using low cost 850nm VCSELS
- Extremely refined refractive index profile
- Low attenuation
- Supporting 40 & 100 Gb/s applications
- Low differential mode delay (DMD)

### Benefits and Applications

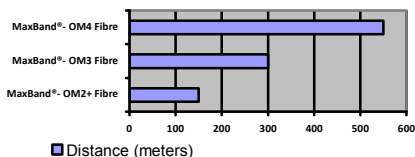
- Superior geometry, uniformity and purity of glass
- Local area networks (LAN)
- Central offices
- Data centers
- High performance computing centers
- Storage Area Networks
- 1, 10, 40, & 100 Gb/s Ethernet
- Optimized performance in tight-buffer cable applications
- High resistance to micro bending
- Stable performance over a wide range of environmental conditions

### System Link Length

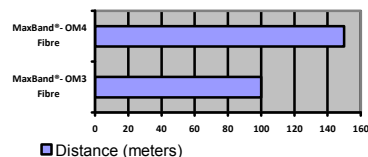
1 Gb/s Link Length @850nm Based on IEEE802.3z



10 Gb/s Link Length @850nm Based on IEEE802.3ae



40 & 100 Gb/s Link Length @850nm Based on IEEE802.3ba



### Product Specifications

#### Geometrical Characteristics

Core Diameter (µm)	50±2.5
Core Non-Circularity (%)	≤5.0
Cladding Diameter (µm)	125.0±1.0
Cladding Non-Circularity (%)	≤1.0
Coating Diameter (µm)	245±7
Coating/Cladding Concentricity Error (µm)	≤12.0
Coating Non-Circularity (%)	≤6.0
Core/Cladding Concentricity Error (µm)	≤1.0

#### Optical Characteristics

	850nm	1300nm	MaxBand® -OM2+	MaxBand® -OM3	MaxBand® -OM4
Attenuation (dB/km)					
OFL Bandwidth (MHz.km)	850nm		≥700	≥1500	≥3500
	1300nm		≥500	≥500	≥500
Effective Model Bandwidth @850nm (MHz.km)			≥950	≥2000	≥4700
	Gigabit Ethernet SX 850nm (m)		750	1000	1100
Application support distance on:	Gigabit Ethernet LX 1300nm (m)		600	600	600
	10 Gigabit Ethernet SX 850nm (m)		150	300	550
	40&100 Gigabit Ethernet SX 850nm (m)		-	100	150

DMD Specification: DMD specifications are compliant with and more stringent than the requirements of IEC60793-2-10 (type A1a.2 for OM3 and type A1a.3 for OM4 (under development) and TIA-492AAAC (OM3) and 492AAAD (OM4).

Numerical Aperture		0.200±0.015
Group Refractive Index	850nm	1.482
	1300nm	1.477
Zero Dispersion Wavelength (nm)		1295-1320
Zero Dispersion Slope (ps/(nm <sup>2</sup> .km))	1295-1300nm	≤0.001*(λ <sub>0</sub> -1190)
	1300-1320nm	≤0.11
Macro bending induced loss	850nm	≤0.50
100 turns @ 30mm diameter	1300nm	≤0.50

#### Backscatter Characteristics (1300nm)

Step (Mean of bidirectional measurement) (dB)	≤0.10
Irregularities over fibre length and point discontinuity (dB)	≤0.10
Attenuation uniformity (dB/km)	≤0.08

#### Environmental Characteristics (850nm & 1300nm)

Temperature dependence induced attenuation at -60°C to +85°C (dB/km)	≤0.10
Temperature-humidity cycling induced attenuation at -10°C to +85°C, 98% RH (dB/km)	≤0.10
Water soak dependence induced attenuation at 23°C for 30 days (dB/km)	≤0.10
Damp heat dependence induced attenuation at 85°C and 85% RH, for 30 days (dB/km)	≤0.10
Dry heat aging at 85°C (dB/km)	≤0.10

#### Mechanical Specification

Proof test	(N)	≥9.0
	(%)	≥1.0
	(kpsi)	≥100
Coating strip force (N)	Typical average force	1.5
	Peak force	≥1.3 ≤8.9
Dynamic stress corrosion susceptibility parameter n <sup>d</sup>		≥27

## Matched Cladding Singlemode fiber (G.652B)

MCSM fibre complies with or exceeds the ITU-T Recommendation G.652.B Optical fibre specification.

### Characteristics

- Low attenuation and low dispersion satisfying the operation demand at 1310nm and 1550nm
- Low PMD satisfying the high bit-rate and long distance transmission links
- Good protection and excellent strip force stability
- Accurate geometrical parameters that insure low splicing loss and high splicing efficiency

### Product Specifications

#### Geometrical Characteristics

Cladding Diameter ( $\mu\text{m}$ )		125.0 $\pm$ 1.0
Cladding Non-Circularity (%)		$\leq$ 1.0
Coating Diameter ( $\mu\text{m}$ )		245 $\pm$ 7
Coating/Cladding Concentricity Error ( $\mu\text{m}$ )		$\leq$ 12.0
Coating Non-Circularity (%)		$\leq$ 6.0
Coating/Cladding Concentricity Error ( $\mu\text{m}$ )		$\leq$ 0.6
Curl (radius) (m)		$\geq$ 4

#### Optical Characteristics

Attenuation (dB/km)	1310nm	$\leq$ 0.34
	1550nm	$\leq$ 0.20
	1625nm	$\leq$ 0.24
Attenuation vs. Wavelength	1285~1330 nm	$\leq$ 0.03 dB/km
Max. $\alpha$ difference	1525~1575 nm	$\leq$ 0.02 dB/km
	1285~1340 nm	$\geq$ -3.5 $\leq$ 3.5 ps/(nm/km)
Dispersion coefficient	1550 nm	$\leq$ 18 ps/(nm/km)
	1625 nm	$\leq$ 22 ps/(nm/km)
Zero Dispersion Wavelength (nm)		1312 $\pm$ 12
Zero Dispersion Slope (ps/(nm <sup>2</sup> .km))		$\leq$ 0.091
Typical value (ps/(nm <sup>2</sup> .km))		0.086

#### PMD

Maximum Individual Fibre ps/ $\sqrt{\text{km}}$		$\leq$ 0.2
Link Design Value (M=20, Q=0.01%) ps/ $\sqrt{\text{km}}$		$\leq$ 0.1
Typical value ps/ $\sqrt{\text{km}}$		0.04
Cable cutoff wavelength $\lambda_c$		$\leq$ 1260 nm
Mode field diameter (MFD)	1310 nm	8.8~9.6 $\mu\text{m}$
	1550 nm	9.9~10.9 $\mu\text{m}$
Effective group index of refraction ( $N_{e\text{ff}}$ )	1310 nm	1.466
	1550 nm	1.467
Point discontinuities	1310 nm	$\leq$ 0.05
	1550 nm	$\leq$ 0.05

#### Environmental Characteristics (1310 nm, 1550 nm & 1625 nm)

Temperature dependence induced attenuation at -60°C to +85°C	$\leq$ 0.05 (dB/km)
Temperature-humidity cycling induced attenuation at -10°C to +85°C, 98% RH	$\leq$ 0.05 (dB/km)
Water soak dependence induced attenuation at 23°C for 30 days	$\leq$ 0.05 (dB/km)
Damp heat dependence induced attenuation at 85°C and 85% RH, for 30 days	$\leq$ 0.05 (dB/km)
Dry heat aging at 85°C	$\leq$ 0.05 (dB/km)

#### Mechanical Specification

Proof test (off line)	(N)	$\geq$ 9.0
	(%)	$\geq$ 1.0
	(kpsi)	$\geq$ 100
Macro-bend induced attenuation		
1 turn around a mandrel of 32mm diameter	1550 nm	$\leq$ 0.05 dB
100 turn around a mandrel of 50mm diameter	1310 & 1550 nm	$\leq$ 0.05 dB
100 turn around a mandrel of 60mm diameter	1625 nm	$\leq$ 0.05 dB
Coating strip force (N)	Typical average force	1.7
	Peak force	$\geq$ 1.3 $\leq$ 8.9
Dynamic stress corrosion susceptibility parameter $n^d$		$\geq$ 20

## FullBand® Low Water Peak Singlemode fiber (G.652D)

FullBand® fibre complies with or exceeds the ITU-T Recommendation G.652.D and the IEC 60793-2-50 type B1.3 Optical fibre specification.

### Characteristics & Application

- Designed for operation over the full optical spectrum from 1260-1625 nm, which provides 50% more usable wavelengths and hence the transmission capacity is increased
- Outstanding optical performance supporting high-speed transmission technologies such as DWDM and CWDM
- Being compatible with existing 1310nm equipment
- Good protection and excellent strip force stability
- Accurate geometrical parameters that insure low splicing loss and high splicing efficiency
- Supports Ethernet, Internet Protocol (IP), Asynchronous Transfer Mode (ATM), Synchronous Optical Network (SONET) and Wavelength Division Multiplexing (WDM). Enables bandwidth demanding of multi-service like voice, digital and image transmission

### Product Specifications

#### Geometrical Characteristics

Cladding Diameter (µm)		125.0±1.0
Cladding Non-Circularity (%)		≤1.0
Coating Diameter (µm)		245±7
Coating/Cladding Concentricity Error (µm)		≤12.0
Coating Non-Circularity (%)		≤6.0
Core/Cladding Concentricity Error (µm)		≤0.6
Curl (radius) (m)		≥4

#### Optical Characteristics

Attenuation (dB/km)	1310nm	≤0.34
	1383nm	≤0.34
	1550nm	≤0.20
	1625nm	≤0.24
Attenuation vs. Wavelength	1285~1330 nm	≤0.03 dB/km
Max. α difference	1525~1575 nm	≤0.02 dB/km
Dispersion coefficient	1285~1340 nm	≥-3.4 ≤3.4 ps/(nm/km)
	1550 nm	≤18 ps/(nm/km)
	1625 nm	≤22 ps/(nm/km)
Zero Dispersion wavelength (nm)		1312±12
Zero Dispersion Slope (ps/(nm <sup>2</sup> .km))		≤0.091
Typical value (ps/(nm <sup>2</sup> .km))		0.086
<b>PMD</b>		
Maximum Individual Fibre ps/√km		≤0.2
Link Design Value (M=20, Q=0.01%) ps/√km		≤0.1
Typical value ps/√km		0.04
Cable cutoff wavelength λ <sub>c</sub>		≤1260 nm
Mode field diameter (MFD)	1310 nm	8.8~9.6 µm
	1550 nm	9.9~10.9 µm
Effective group index of refraction (N <sub>e</sub> <sup>eff</sup> )	1310 nm	1.466
	1550 nm	1.467
Point discontinuities	1310 nm	≤0.05
	1550 nm	≤0.05

#### Environmental Characteristics (1310 nm, 1550 nm & 1625 nm)

Temperature dependence induced attenuation at -60°C to +85°C	≤0.05 (dB/km)
Temperature-humidity cycling induced attenuation at -10°C to +85°C, 98% RH	≤0.05 (dB/km)
Water soak dependence induced attenuation at 23°C for 30 days	≤0.05 (dB/km)
Damp heat dependence induced attenuation at 85°C and 85% RH, for 30 days	≤0.05 (dB/km)
Dry heat aging at 85°C	≤0.05 (dB/km)

#### Mechanical Specification

Proof test (off line)	(N)	≥9.0
	(%)	≥1.0
	(kpsi)	≥100
Macro-bend induced attenuation		
1 turn around a mandrel of 32mm diameter	1550 nm	≤0.05 dB
100 turn around a mandrel of 50mm diameter	1310 & 1550 nm	≤0.05 dB
100 turn around a mandrel of 60mm diameter	1625 nm	≤0.05 dB
Coating strip force (N)	Typical average force	1.7
	Peak force	≥1.3 ≤8.9
Dynamic stress corrosion susceptibility parameter n <sup>d</sup>		≥20

## Large Effective Area High Capacity Positive Dispersion Shifted Singlemode fiber (G.655)

LAPOSH® fibre complies with or exceeds the ITU-T Recommendation G.655 Optical fibre specification.

### Characteristics & Application

- Being applicable in the high bit-rate operation across 1530-1565nm and 1565-1625nm band
- Large effective area ensures good economic return from the transmission system
- Low attenuation, low dispersion, low PMD and low zero dispersion slope that satisfy the demand of transmission links
- Good protection and excellent strip force stability
- Accurate geometrical parameters that insure low splicing loss and high splicing efficiency
- Low bending induced loss at 1550nm and at the more sensitive 1625nm wavelength
- This fibre is suitable for application of high output power Erbium Doped Fibre Amplifier (EDFA) and multi-channel Dense Wavelength Division Multiplex (DWDM), and can be effectively applied in the high bit-rate both single and multi-channel, long distance digital transmission links even without dispersion compensation

### Product Specifications

#### Geometrical Characteristics

Cladding Diameter (µm)		125.0±1.0
Cladding Non-Circularity (%)		≤1.0
Coating Diameter (µm)		245±7
Coating/Cladding Concentricity Error (µm)		≤12.0
Coating Non-Circularity (%)		≤6.0
Core/Cladding Concentricity Error (µm)		≤0.6
Curl (radius) (m)		≥4

#### Optical Characteristics

Attenuation (dB/km)	1550nm	≤0.22
	1625nm	≤0.24
Attenuation vs. Wavelength	1525~1575 nm	≤0.02 dB/km
Max. α difference		
Dispersion coefficient	1530~1565 nm	≥2.0 ≤6.0 ps/(nm/km)
	1565~1625 nm	≥4.5 ≤11.2 ps/(nm/km)
Zero Dispersion Wavelength (nm)		≤1520
Zero Slope at 1550nm (ps/(nm <sup>2</sup> .km))		≤0.084
Typical dispersion slope at 1550nm (ps/(nm <sup>2</sup> .km))		0.075

#### PMD

Maximum Individual Fibre ps/√km		≤0.2
Link Design Value (M=20, Q=0.01%) ps/√km		≤0.08
Typical value ps/√km		0.04
Cable cutoff wavelength λ <sub>c</sub>		≤1450 nm
Mode field diameter (MFD)	1550 nm	9.1~10.1 µm
Effective group index of refraction (N <sub>e</sub> <sup>eff</sup> )	1550 nm	1.469
	1625 nm	1.469
Point discontinuities	1550 nm	≤0.05 dB

#### Environmental Characteristics (1550 nm & 1625 nm)

Temperature dependence induced attenuation at -60°C to +85°C	≤0.05 (dB/km)
Temperature-humidity cycling induced attenuation at -10°C to +85°C, 98% RH	≤0.05 (dB/km)
Water soak dependence induced attenuation at 23°C for 30 days	≤0.05 (dB/km)
Damp heat dependence induced attenuation at 85°C and 85% RH, for 30 days	≤0.05 (dB/km)
Dry heat aging at 85°C	≤0.05 (dB/km)

#### Mechanical Specification

Proof test (off line)	(N)	≥9.0
	(%)	≥1.0
	(kpsi)	≥100
Macro-bend induced attenuation		
1 turn around a mandrel of 32mm diameter	1550 nm	≤0.05 dB
100 turn around a mandrel of 50mm diameter	1310 & 1550 nm	≤0.05 dB
100 turn around a mandrel of 60mm diameter	1625 nm	≤0.05 dB
Coating strip force (N)	Typical average force	1.5
	Peak force	≥1.3 ≤8.9
Dynamic stress corrosion susceptibility parameter n <sup>d</sup>		≥27

## High Capacity Low Slop Dispersion Shifted Singlemode fiber (G.656)

HIPOSH® fibre complies with or exceeds the ITU-T Recommendation G.655 and G.656 Optical fibre specification.

### Characteristics & Application

- Suitable for high bit-rate (10 Gb/s and 40 Gb/s) and long distance DWDM transmission system in S+C+L bands
- Supporting 1310nm window transmission on the same fibre
- Lower dispersion compensation costs for metro networks, providing lowest first channel costs
- A relative low dispersion slope applicable for chromatic dispersion and dispersion slope compensation
- Good protection and excellent strip force stability and bending property
- Accurate geometrical parameters that insure low splicing loss and high splicing efficiency
- Low bending induced loss at 1550nm and at the more sensitive 1625nm wavelength

### Product Specifications

#### Geometrical Characteristics

Cladding Diameter (µm)	125.0±1.0
Cladding Non-Circularity (%)	≤1.0
Coating Diameter (µm)	245±7
Coating/Cladding Concentricity Error (µm)	≤12.0
Coating Non-Circularity (%)	≤6.0
Core/Cladding Concentricity Error (µm)	≤0.6
Curl (radius) (m)	≥4

#### Optical Characteristics

Attenuation (dB/km)	1310nm	≤0.36
	1460nm	≤0.25
	1550nm	≤0.21
	1625nm	≤0.24
Attenuation vs. Wavelength	1525~1575 nm	≤0.02 dB/km
Dispersion coefficient	1460 nm	≥2.0 ps/(nm/km)
	1530~1565 nm	≥5.5 ≤10.0 ps/(nm/km)
	1565~1625 nm	≥7.5 ≤13.4 ps/(nm/km)
Zero Dispersion wavelengt (nm)		≤1420
Dispersion Slope at 1550nm (ps/(nm <sup>2</sup> .km))		≤0.06
Typical dispersion slope at 1550nm (ps/(nm <sup>2</sup> .km))		0.052

#### PMD

Maximum Individual Fibre ps/√km		≤0.2
Link Design Value (M=20, Q=0.01%) ps/√km		≤0.08
Typical value ps/√km		0.04
Cable cutoff wavelength λ <sub>c</sub>		≤1260 nm
Mode field diameter (MFD)	1550 nm	8.5~9.5 µm
Effective group index of refraction (N <sub>e</sub> <sup>eff</sup> )	1550nm & 1625nm	1.469
Point discontinuities	1550 nm	≤0.05

#### Environmental Characteristics (1550 nm & 1625 nm)

Temperature dependence induced attenuation at -60°C to +85°C	≤0.05 (dB/km)
Temperature-humidity cycling induced attenuation at -10°C to +85°C, 98% RH	≤0.05 (dB/km)
Water soak dependence induced attenuation at 23°C for 30 days	≤0.05 (dB/km)
Damp heat dependence induced attenuation at 85°C and 85% RH, for 30 days	≤0.05 (dB/km)
Dry heat aging at 85°C	≤0.05 (dB/km)

#### Mechanical Specification

Proof test (off line)	(N)	≥9.0
	(%)	≥1.0
	(kpsi)	≥100
Macro-bend induced attenuation		
1 turn around a mandrel of 32mm diameter	1550 nm	≤0.05 dB
100 turn around a mandrel of 50mm diameter	1310 & 1550 nm	≤0.05 dB
100 turn around a mandrel of 60mm diameter	1625 nm	≤0.05 dB
Coating strip force (N)	Typical average force	1.5
	Peak force	≥1.3 ≤8.9
Dynamic stress corrosion susceptibility parameter n <sup>d</sup>		≥27



## EasyBand® Bending Insensitive Singlemode fiber (G.657.A)

EasyBand® Bending Insensitive singlemode fibre meets or exceeds the ITU-T Recommendation G.652.D & G.657.A including the IEC 60793-2-50 type B1.3 Optical fibre specification.

### Characteristics & Application

- Low attenuation satisfying the operation demand in O-E-S-C-L band
- Good bending loss resistance at short radius bends
- Low micro-bending loss for highly demanding cable designs including ribbons
- Low PMD satisfying high bit-rate and long distance transmission requirements
- Accurate geometrical parameters that insure low splicing loss and high splicing efficiency
- Used in high performance optical network operating in O-E-S-C-L band & high speed optical routes in buildings (FTTx)

### Product Specifications

#### Geometrical Characteristics

Cladding Diameter (µm)	125.0±1.0
Cladding Non-Circularity (%)	≤0.7
Coating Diameter (µm)	245±5
Coating/Cladding Concentricity Error (µm)	≤12.0
Coating Non-Circularity (%)	≤6.0
Core/Cladding Concentricity Error (µm)	≤0.5
Curl (radius) (m)	≥4

#### Optical Characteristics

Attenuation (dB/km)	1310nm	≤0.35
	1383nm (after H <sub>2</sub> -aging)	≤0.35
	1460nm	≤0.25
	1550nm	≤0.21
	1625nm	≤0.23
Attenuation vs. Wavelength	1285~1330 nm	≤0.03 dB/km
	1525~1575 nm	≤0.02 dB/km
Max. α difference	1285~1340 nm	≥-3.4 ≤3.4 ps/(nm/km)
	1550 nm	≤18 ps/(nm/km)
Dispersion coefficient	1550 nm	≤22 ps/(nm/km)
	1625 nm	≤22 ps/(nm/km)
Zero Dispersion wavelength (nm)		1300~1324
Zero Dispersion Slope (ps/(nm <sup>2</sup> .km))		≤0.092
Typical value (ps/(nm <sup>2</sup> .km))		0.086

#### PMD

Maximum Individual Fibre ps/√km	≤0.2	
Link Design Value (M=20, Q=0.01%) ps/√km	≤0.1	
Typical value ps/√km	0.04	
Cable cutoff wavelength λ <sub>c</sub>	≤1260 nm	
Mode field diameter (MFD)	1310 nm	8.4~9.2 µm
	1550 nm	9.3~10.3 µm
Effective group index of refraction (N <sub>e</sub> <sup>eff</sup> )	1310 nm	1.466
	1550 nm	1.467
Point discontinuities	1310 nm	≤0.05
	1550 nm	≤0.05

#### Environmental Characteristics (1310 nm, 1550 nm & 1625 nm)

Temperature dependence induced attenuation at -60°C to +85°C	≤0.05 (dB/km)
Temperature-humidity cycling induced attenuation at -10°C to +85°C, 98% RH	≤0.05 (dB/km)
Water soak dependence induced attenuation at 23°C for 30 days	≤0.05 (dB/km)
Damp heat dependence induced attenuation at 85°C and 85% RH, for 30 days	≤0.05 (dB/km)
Dry heat aging at 85°C	≤0.05 (dB/km)

#### Mechanical Specification

Proof test (off line)	(N)	≥9.0	
	(%)	≥1.0	
	(kpsi)	≥100	
Macro-bend induced attenuation	10 turns around a mandrel of 30mm diameter	1550 nm	≤0.25 dB
	10 turns around a mandrel of 30mm diameter	1625 nm	≤1.0 dB
	1 turn around a mandrel of 20mm diameter	1550 nm	≤0.75 dB
	1 turn around a mandrel of 20mm diameter	1625 nm	≤1.5 dB
Coating strip force (N)	Typical average force		1.7
	Peak force		≥1.3 ≤8.9
Dynamic stress corrosion susceptibility parameter n <sup>d</sup>			≥20