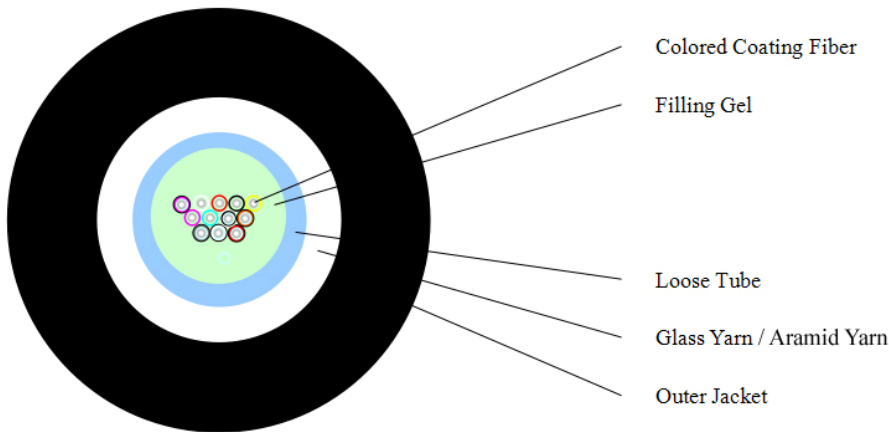


# UNIVERSAL CENTRAL LOOSE TUBE CABLE INDOOR/OUTDOOR

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Date	Author	Review	Approve	Version	Revision Declaration
JUN 2015	R.T.	S.T.	L.K.	A1	-

## CROSS SECTION



## Features & Benefits

- Streamlined installation with direct outdoor-to-indoor cable transitions.
- No splicing required at building entrance
- Available in sizes from 2 to 24 fibers
- Jelly filled (non-dripping and silicon-free) loose tube with primary coated optical fiber ( $\varnothing 250\mu\text{m} \pm 15\mu\text{m}$ )
- Full dielectric construction, no grounding required
- Choice of fiber types
- Color coded fibers
- E-glass strength members for rodent resistance
- Flame retardant LSZH jacket for enhanced fire performance
- Compact 250 $\mu\text{m}$  loose tube construction

## Applications

- For outdoor and indoor use in structured (data) wiring system
- Ideal for intra building links in campus environments
- Easy to install in ducts, tunnels and trenches by means of compressed air or pulling wire
- Suitable for direct burial
- Suitable for environments where rodent resistance is required

## Compliance

Optical cables fulfill one or more of the following standards:

- DIN VDE 0888
- IEC 60793
- IEC 60794-1-E1 (Pulling strength)
- IEC 60794-1-E3 (Crushing)
- IEC 60794-1-E4 (Accidental impact)
- ITU-T Rec G.651 to G.657
- IEC 60794-1-E6 (Continuous bending)
- IEC 60794-1-E11 (Minimum bending radius)
- IEC 60794-1-F1 (Temperature)
- IEC-60332-3C - CEI 20-22/III (Flame resistance)

# Specifications

No.	Items	Unit	G.652D		G.655 C & D		OM1		OM2		OM3		OM4			
			9/125		9/125		62.5/125		50/125		50/125		50/125			
1	Mode Field Diameter	μm	9.2±0.4	10.4±0.5	9.6±0.5		62.5±2.5		50.0±2.5		50.0±2.5		50.0±2.5			
2	Cladding Diameter	μm	124.8±0.7		124.8±0.7		125.0±1.0		124.8±1.0		124.8±1.0		124.8±1.0			
3	Wave-length	nm	1310	1550	1550	1625	850	1300	850	1300	850	1300	850	1300		
4	Cladding Non-Circularity	%	≤0.7		≤0.7		≤1.0		≤1.0		≤1.0		≤1.0			
5	Core-Cladding Concentricity Error	μm	≤0.5		≤0.5		≤1.0		≤1.5		≤1.0		≤1.0			
6	Coating Diameter	μm	245±5		242±5		245±10		245±7		245±7		245±7			
7	Coating Non-Circularity	%	≤6.0		≤6.0		≤6.0		≤6.0		≤6.0		≤6.0			
8	Cladding-Coating Concentricity Error	μm	≤12.0		≤12.0		≤10.0		≤10.0		≤10.0		≤10.0			
9	Attenuation (max.)	dB/km	≤0.36	≤0.25	≤0.20	≤0.22	≤3.5	≤1.5	≤3.5	≤1.5	≤3.5	≤1.5	≤3.5	≤1.5		
10	Dispersion	ps/nm-km	≤5.3	≤18	≤6.0	≤11.2										
11	Polarization mode dispersion (PMD)	ps/km <sup>1/2</sup>	≤0.2		≤0.2		≤0.11		≤0.105		≤0.105		≤0.105			
12	Cable Cut-off Wave-length	nm	λ <sub>cc</sub> ≤1260		λ <sub>cc</sub> ≤1450		λ <sub>cc</sub> ≤1365		λ <sub>cc</sub> ≤1340		λ <sub>cc</sub> ≤1340		λ <sub>cc</sub> ≤1340			
13	Bandwidth	MHz/km					≥200	≥500	≥500	≥500	≥2000	≥500	≥4700	≥500		
14	Ethernet Performance 1GBE	m	No required		No required		275	33	600	82	900	300	900	550		
15	Ethernet Performance 10GBE	m					550	300	600	300	550	300	550	300		
16	Num. Apert.	μm					0.275±0.015		0.200±0.015		0.200±0.015		0.200±0.015			
17	Refractive index	m	1,466	1,467	1,469	1,469	1,497	1,493	1,483	1,478	1,483	1,478	1,483	1,478		
Mechanical and Environmental	18	Tension (Long Term)	N	600N		600N		600N		600N		600N		600N		
	19	Tension (Short Term)	N	1500N		1500N		1500N		1500N		1500N		1500N		
	20	Crush (Long Term)	N/10cm	300N		300N		300N		300N		300N		300N		
	21	Crush (Short Term)	N/10cm	1000N		1000N		1000N		1000N		1000N		1000N		
	22	Min. Bend Radius (Dynamic)	mm	20D		20D		20D		20D		20D		20D		
	23	Min. Bend Radius (Static)	mm	10D		10D		10D		10D		10D		10D		
	24	Fire load	/	IEC-60332-3 (on request IEC-60332-1, IEC-60332-2)												
	24	Installation Temperature	°C	-20 ~ +60												
	25	Operating Temperature	°C	-40 ~ +70												
26	Storage Temperature	°C	-40 ~ +70													
Cable parameters	27	Fiber Count	n.	2 to 24												
	28	Colored Coating	Dimension	μm	250±15											
			Color	/	Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Purple, Pink, Aqua,											
	29	Loose Tube	Dimension	mm	2.0±0.1											
			Material	/	PBT											
			Color	/	Natural											
	30	Strength Member	/	Aramid Yarn (AY) or E-Glass Yarn (GY)												
31	Outer Jacket	Color	/	Black (other color on request)												
		Material	/	LSZH (PE on request)												
		Dimension	mm	5.8±0.2 / 6.7±0.2 / 7.4±0.2 (other dimension on request)												
Standard plywood reel (non returnable):																
Standard delivery length: 2100±100 m and 4100±100 m																