

LOW COUNT DUCT FIBRE OPTIC CABLE

APPLICATION

- ◆ Short Haul, Campus, Lan
- ◆ Indoor
- ◆ Access

LCD CABLES

CONSTRUCTION

MONO OR SINGLE TUBE	PBT (Polybutylene Terephthalate) filled with thixotropic gel
FIBRES	Max of 12 colour coated fibres
WATER BLOCKING	Core wrapping and overall
PERIPHERAL STRENGTH MEMBERS	Aramid
SHEATHING	PVC – Polyvinyl Chloride or LSZH – Low Smoke Zero Halogen

MECHANICAL PROPERTIES

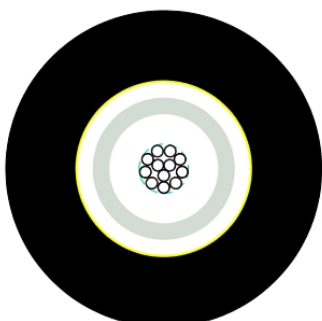
FIBRE COUNT	NUMBER OF ELEMENTS	CABLE DIAMETER NOMINAL (mm)	CABLE WEIGHT (kg/km)	MAXIMUM INSTALLATION LOAD (N)	OPERATION TEMPERATURE RANGE	BENDING RADIUS	
						LONG TERM	SHORT TERM
Up to 12	1	6.7	48	1000	-10°C to 40°C	20 x OD	10 x OD

FIBRE AND BUFFER COLOURS AS TIA/EIA

1	Blue	2	Orange	3	Green	4	Brown	5	Grey	6	White
7	Red	8	Black	9	Yellow	10	Violet	11	Pink	12	Turquoise

ORDERING INFORMATION

FIBRE COUNT	CABLE TYPE	FIBRE TYPE ITU-T	DRUM QUANTITY (m)
12	Low Count Duct (LCD)	G657.A1	4000



LOW COUNT DUCT FIBRE OPTIC CABLE

Page 2 of 3

LCD CABLES

OPTICAL PROPERTIES (Bend tolerant Multi-Mode)

CHARACTERISTICS		ITU-T G.651 OM2	ITU-T G.651 OM3	ITU-T G.651 OM4
Fibre Core Diameter (µm)		50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5
Cabled Attenuation (dB/km)	850nm	≤ 3	≤ 2.5	≤ 2.5
	1300nm	≤ 1	≤ 0.7	≤ 0.7
Macro-Bend Loss	850nm	Ø15mm, 2turns, ≤ 0.2dB	Ø15mm, 2turns, ≤ 0.2dB	Ø15mm, 2turns, ≤ 0.2dB
		Ø30mm, 2turns, ≤ 0.1dB	Ø30mm, 2turns, ≤ 0.1dB	Ø30mm, 2turns, ≤ 0.1dB
		Ø75mm, 100turns, ≤ 0.05dB	Ø75mm, 100turns, ≤ 0.05dB	Ø75mm, 100turns, ≤ 0.05dB
	1300nm	Ø15mm, 2turns, ≤ 0.5dB	Ø15mm, 2turns, ≤ 0.5dB	Ø15mm, 2turns, ≤ 0.5dB
		Ø30mm, 2turns, ≤ 0.3dB	Ø30mm, 2turns, ≤ 0.3dB	Ø30mm, 2turns, ≤ 0.3dB
		Ø75mm, 100turns, ≤ 0.15dB	Ø75mm, 100turns, ≤ 0.15dB	Ø75mm, 100turns, ≤ 0.15dB
Bandwidth	High Performance EMB* (MHz.km)	950@850nm -	2000@850nm -	4700@850nm -
	Legacy Performance EMB** (MHz.km)	700@850nm 500@1300nm	1500@850nm 500@1300nm	3500@850nm 500@1300nm
Optimised Data Rate over Distance	-	40/100 Gb/s over 140m***	40/100 Gb/s over 170m***	
	10 Gb/s over 150m	10 Gb/s over 300m	10 Gb/s over 550m	
	1 Gb/s over 750m	1 Gb/s over 1000m	1 Gb/s over 1100m	
Cladding Diameter (µm)		125 ± 1	125 ± 1	125 ± 1
Cladding Non Circulatory (%)		≤ 1	≤ 1	≤ 1
Core-Clad Concentricity (µm)		≤ 1.5	≤ 1.5	≤ 1.5
Cable Cut-Off Wavelength (nm)			≤ 1260	≤ 1260

* Ensured via minEMBc per TIA 455-22A and IEC 60793-1-49, for high performance laser-based systems (up to 100Gb/s)

** OFLBW, per TIA/EIA 455-2-4 and IEC 60793-1-41, for legacy and LED-based systems (typically up to 100Mb/s)

*** Distances specified in the 40G/100G per IEEE 802.3ba standard are 150m for OM4 and 100m for OM3 (For these distances cabled attenuation ≤ 3.0dB/km and 1.0dB of connector loss is assumed.)

LOW COUNT DUCT FIBRE OPTIC CABLE

Page 3 of 3

LCD CABLES

OPTICAL PROPERTIES			
CHARACTERISTICS		ITU-T.652D	ITU-T.657A1
Modefield Diameter (µm)	1310nm	9.2 ± 0.4	9.2 ± 0.4
	1550nm	10.4 ± 0.5	10.4 ± 0.5
Cabled Attenuation (dB/km)	1310nm	≤ 0.34	± 0.34
	1550nm	≤ 0.20	± 0.20
Polarization Mode Dispersion (ps/√km)	Link (PMDQ)	≤ 0.04	≤ 0.04
	Individual (PMDmax)	≤ 0.1	≤ 0.1
Chromatic Dispersion (ps/nm.km)	1285-1330nm	3	3
	1550nm	≤ 18	≤ 18
	1625nm	≤ 22	≤ 22
Macro-Bend Loss	1550nm	Ø32mm, 1turn, ≤ 0.03dB	Ø10mm, 1turn, ≤ 0.5dB
		Ø50mm, 100turns, ≤ 0.03dB	Ø15mm, 10turns, ≤ 0.05dB
			Ø25mm, 100turns, ≤ 0.01dB
	1625nm		Ø10mm, 1turn, ≤ 1.5dB
			Ø15mm, 10turns, ≤ 0.3dB
		Ø50mm, 100turns, ≤ 0.03dB	Ø25mm, 100turns, ≤ 0.01dB
Cladding Diameter (µm)		125 ± 0.7	125 ± 0.7
Cladding Non Circulatory (%)		≤ 0.7	≤ 1
Core-Clad Concentricity (µm)		≤ 0.5	≤ 0.6
Cable Cut-Off Wavelength (nm)		≤ 1260	≤ 1260
Local Variations : Cabled (dB)		≤ 0.1@1550nm	≤ 0.1@1550nm