

TECHNICAL DETERMINATION		No : TEL-00019
		Issue : 1

<b>CUSTOMER</b>
<b>PT. LINTAS TEKNOLOGI INDONESIA</b>

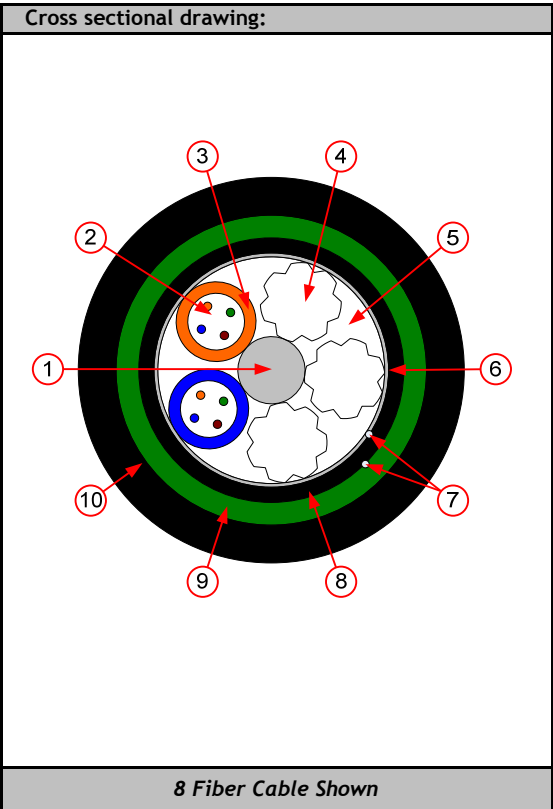
DOCUMENT REFERENCE	
No	Document Description
1	NETVIEL STANDARD

DOCUMENT REVISION HISTORY		
Issue No	Date	Revision Description
1	26/01/2012	First Issue

DEVIATION LIST ( IF ANY)		
	Customer Spec Required	Netviel Offered
Clause	Description	

TO BE APPROVED BY CUSTOMER PRIOR TO CONTRACT AWARDED			
Name	Position	Signature	Date

## 8 FO ARMOUR CABLE



Construction details	
1 Central strength member (CSM)	Glass Reinforced Plastic (GRP)
Diameter	2 mm
2 Fiber	Refer to requirement
3 Loose Tubes	PBT with Thixotropic water Tightness Jelly
ID/OD Diameter	1.6/2.4 mm
4 Star Shape Filler	Polyethylene
5 Cable Core Application	To prevent the ingress of water, the cable core is <b>JELLY FILLED</b>
6 Core Wrapping	Polyester Tape
7 Ripcord	1 Ripcord each under Inner Sheath & Armour
8 Inner Sheath	Black High Density Polyethylene
Nominal Thickness	0.9 mm
9 Armour	Laminated Corrugated Steel Tape
10 Outer Sheath	Black High Density Polyethylene
Nominal Thickness	1.5 mm
Cable Diameter & Weigth	
Cable Diameter ( Approx )	13.6 mm
Cable Weight ( Approx )	177 kg/km

**Fiber and tube colours:**

Fibre 1/	Fibre 2/	Fibre 3	Fibre 4								
Tube 1	Tube 2										
Blue	Orange	Green	Brown								

**The cable are designed and manufactured in order to withstand the following test conditions:**

Test	Test Method	Value	Acceptance Criteria
Tensile	IEC 60794-1-2 E1A	2000 N (During Installation)	Attn Increase ≤ 0.1 dB at 1550nm
Impact	IEC 60794-1-2 E4	3 N.m	Attn Increase ≤ 0.1 dB at 1550nm
Crush	IEC 60794-1-2 E3	2000 N/100mm	Attn Increase ≤ 0.1 dB at 1550nm
Torsion	IEC 60794-1-2 E7	2 turn at 180 degree	Attn Increase ≤ 0.1 dB at 1550nm
Temperature Cycling	IEC 60794-1-2 F1	10 to +70	Attn Increase ≤ 0.1 dB/km at 1550nm
Water Penetration	IEC 60794-1-2 F5B	3m Sample, 24 hours	No water shall be detected at the unsealed end of the sample

**Cable Marking :**

It is proposed to print on the cable sheath with hot foil print method, the following text at one metre intervals.

=[length marking]= NETVIEL [Year] ARMOUR [Fiber Type] 8/2T =[length marking+1]=

**Routine tests**

100% of optical fibres will be measured by OTDR technique before leaving factory.

**Standard Length**

4000 meters with Tolerance +/- 1%

OPTICAL FIBER CHARACTERISTICS		
REFERENCE STANDARD	ITU-T G652D	
PARAMETER	UNIT	VALUE / DETAIL
GENERAL CHARACTERISTICS		
Material		Silica/doped silica
Refractive Index Profile		Step Index
Manufacturing Process		OVD
EFFECTIVE GROUPS INDEX		
@ 1310		1.467
@1550		1.468
COATING CHARACTERISTICS		
Primary Coating Material		Dual Layer UV Cured Acrylate Resin
External Coating Diameter	µm	245 ± 5
Coating /Cladding Concentricity	µm	≤ 12
GEOMETRICAL CHARACTERISTICS		
Mode Field Diameter @1310 nm	µm	9.2 ± 0.4
Cladding Diameter	µm	125 ± 0.7
MFD/Cladding Concentricity Error	µm	≤ 0.6
Cladding non Circularity Error	%	≤ 0.8
CABLE CUT-OFF WAVELENGTH		
Cable Cut-Off Wavelength (λ <sub>cc</sub> )	nm	≤ 1260
ATTENUATION COEFFICIENTS		
@1310 nm	dB/km	≤ 0.36
@1550 nm	dB/km	≤ 0.22
Attenuation Uniformity (1310 & 1550)	dB/km	≤ 0.05
Profile Uniformity (1310 & 1550)	dB	≤ 0.05
DISPERSION COEFFICIENTS		
1285 - 1330 nm	ps/(nm.km)	≤ 3.5
@1550 nm	ps/(nm.km)	≤ 18
@1625 nm	ps/(nm.km)	≤ 22
Zero Dispersion Wavelength	nm	1300 - 1324
Zero Dispersion Slope S <sub>0</sub>	ps/(nm <sup>2</sup> .km)	≤ 0.092
Polarisation Mode Dispersion	ps/√km)	≤ 0.2
PMDlink	ps/√km)	≤ 0.06
MECHANICAL CHARACTERISTICS		
Proof Test	%	≥ 1
<b>Except for attenuation at wavelength 1310 and 1550 nm, all data of value above are guaranteed by fibre supplier</b>		