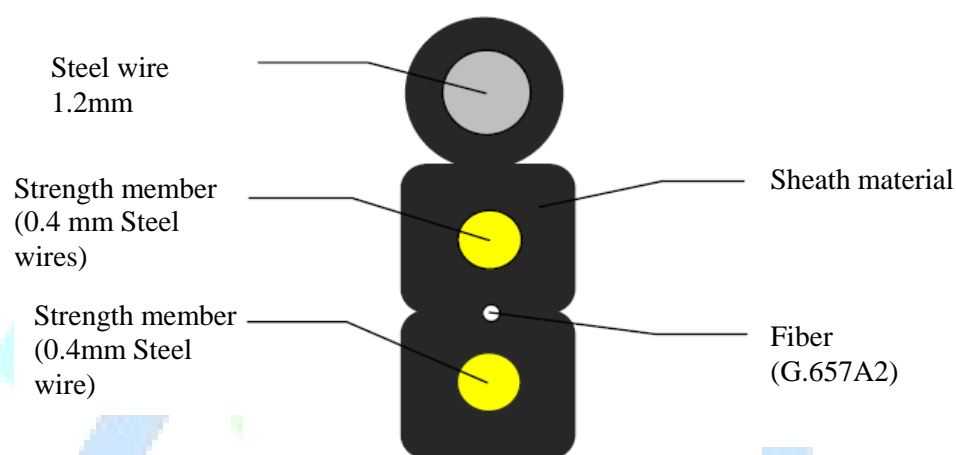
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Introduction: This specification covers the requirements of *Self – Supporting Single Core Optical Fiber Drop Wire* to be installed between Fiber Distribution Point (FDP) and customer location. This fiber drop wire will be mostly used for FTTH new connection.


Application: Applicable locations in FTTH network are mentioned below.

- From FDP to customer premises.

Characteristics, Specifications & Requirements



1. Drop Wire should comply with **ITU-T G.657 A2** standard with Characteristics of a Single-Mode Optical Fiber.
2. Steel bearer wire shall be fully galvanized to avoid corrosion.
3. Nominal Diameter of Steel Bearer Wire (mm) - 1.2 ± 0.05
4. In general it is understood “this proposed bearer wire” too big for a fiber drop wire. But in this stage we have to use this “optical fiber drop wire” with existing “copper drop wire installation accessories” in the field.
5. Sheath material to be of PVC material.
6. Strength member compulsory to be Steel wire – 0.4mm Normal Diameter.
7. Should have two strength members both side of fiber.
8. The bearer wire shall be torn off easily from the fiber cable without damaging the PVC outer cover of the fiber.
9. PVC outer cover of the fiber drop wire shall be able to easily remove without damaging the fiber. (The fiber shouldn’t bond to the PVC cover.).


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10. Should withstand exposure to solar UV radiation.
11. The cables shall be capable of being operated at least over the temperature range 0°C to +70°C and the humidity range up to 100% while meeting the overall performance. The cables shall be capable of being handled and deployed over the temperature range -10°C to + 70°C without causing permanent impairment to their specified performance.
12. The cables shall also be capable of being stored or transported at least over the temperature range -40°C to +70°C without causing permanent impairment to their specified performance.
13. All materials shall withstand the environmental conditions of all parts of Sri Lanka such as sea breeze, rain, exposure to tropical sun light etc.
14. The wire shall be capable of being wrapped 5 times around a mandrel having a diameter of 15 times the wire diameter and then undone without a fracture.
15. There shall be a continuous single bearer wire per one drum. No joints in the bearer wire are accepted.
16. The fiber drop wire identification (Yellow line) shall have the same durability properties as the sheath material.
17. A yellow color line shall be appear on the optical fiber drop wire continuously, The main objective is to identify optical fiber drop wires among copper drop wires in the field.
18. In this regard if the manufacturer has a different proposal/suggestion, it is possible to consider at the technical evaluation if submitted in detail describing advantages over the proposed.
19. This identification shall not be on the bearer wire. Identification should be available even after removing the bearer wire.
20. This yellow line or other type of “optical fiber drop wire identification” shall be visible throughout the “drop wire life time” at any climatic condition of Sri Lanka.

* Note: Branding Unit approved SLT Logo is given below.




- 1 Supplier Compliance Sheet – to be filled by the supplier – in Page 2**
- 2 QA Section Test Report – to be filled by the QA Staff – in Page 3**
- 3 Field Report Format – to be filled by the field staff – in Page 4**

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Supplier Compliance Sheet

Index No.	Characteristics	Feature	SLT Requirement	Complied / Not Complied	If Complied, whether it has been provided with the Bid Proposal (Yes / No)	Location of the Reference (Document No., Chapter No., Heading No., Paragraph No., Line No. of the supporting bid document)	Explanatory Notes
1	General	1.1 Product Description	Fiber Drop Wire (FDW)				
		1.2 Number of years, does FDW manufacturer provides its product in international/Local Telco industry	More than 3 years				
		1.3 Complete profile of FDW manufacturer is supplied	Data sheets, Specification sheets, Profile of company				
2	Dimensions	2.1 Nominal Diameter of Steel Bearer Wire	(1.2 ± 0.05)mm				
		2.2 Nominal Diameter of steel strength member	0.4mm				
3	Material	3.1 Strength member	Steel				
		3.1.1 Tensile loading (max in "N") (Within 50m span)	IEC 60794-1-E1				
		3.1.2 Crush Resistance	IEC 60794-1-E3				
		3.2 Sheath material	PVC				
4	Characteristics	3.3 Steel member	GI (Fully Galvanised Iron)				
		4.1 Drop Cable Type	ITU-T G.657.A2				
		4.2 Fiber Type	Single Mode				
		4.3 Number of Strength members	2				
		4.4 Bearer characteristics	Should be torn easily without damaging outer cover of fiber				
		4.5 Fiber outer cover	Should be removed easily without damaging the fiber				
		4.6 Material durability_1	Can be wrapped 5 times around a mandrel having a diameter of 15 times the wire diameter without fracture				
		4.7 Material durability_2	Must withstand solar UV radiation				
5	Marking	4.8 Material durability on Temperature	-40 to +70 Celsius				
		5.1 FDW identification	Yellow Line				
		5.2 FDW identification Durability	Same as above 4.6, 4.7 & 4.8				
Signature				Company(Signature with Frank)			
Name							
Date							

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QA Section Test Report

Index No.	Characteristics	Feature	SLT Requirement	Measurement/Observation
1	General	1.1 Product Description	Fiber Drop Wire (FDW)	
		1.2 Number of years, does FDW manufacturer provides its product in international/Local Telco industry	More than 3 years	
		1.3 Complete profile of FDW manufacturer is supplied	Data sheets, Specification sheets, Profile of company	
2	Dimensions	2.1 Nominal Diameter of Steel Bearer Wire	(1.2 ± 0.05)mm	
		2.2 Nominal Diameter of steel strength member	0.4mm	
3	Material	3.1 Strength member	Steel	
		3.1.1 Tensile loading (max in "N") (Within 50m span)	IEC 60794-1-E1	
		3.1.2 Crush Resistance	IEC 60794-1-E3	
		3.2 Sheath material	PVC	
		3.3 Steel member	GI (Fully Galvanised Iron)	
4	Characteristics	4.1 Drop Cable Type	ITU-T G.657.A2	
		4.2 Fiber Type	Single Mode	
		4.3 Number of Strength members	2	
		4.4 Bearer characteristics	Should be torn easily without damaging outer cover of fiber	
		4.5 Fiber outer cover	Should be removed easily without damaging the fiber	
		4.6 Material durability_1	Can be wrapped 5 times around a mandrel having a diameter of 15 times the wire diameter without fracture	
		4.7 Material durability_2	Must withstand solar UV radiation	
		4.8 Material durability on Temperature	-40 to +70 Celsius	
5	Marking	5.1 FDW identification	Yellow Line	
		5.2 FDW identification Durability	Same as above 4.6, 4.7 & 4.8	
Signature		Signature with Frank		
Name				
Date				

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Field Report Format

No	Observations/ Experience at the Installation/ subsequent	Comment	Remarks if any
1	Nominal Diameter of Steel Bearer Wire is (1.2 ± 0.05)mm	Yes/ No	
2	2.2 Nominal Diameter of steel strength member	Yes/ No	
3	Strength member is steel	Yes/ No	
4	Sheath material is PVC	Yes/No	
5	Steel member is GI (Fully Galvanized Iron)	Yes/No	
6	Number of Strength members are 2	Yes/No	
7	Cable Type-G.657.A2	Yes/No	
8	Bearer should be torn easily without damaging outer cover of fiber	Yes/No	
9	Fiber outer cover should be removed easily without damaging the fiber	Yes/No	
10	Cabel can be wrapped 5 times around a mandrel having a diameter of 15 times the wire diameter without fracture	Yes/No	
11	A yellow line is visible as FDW identification	Yes/No	
Signature.....		Date:.....	
Service No.....			

Sri Lanka Telecom PLC