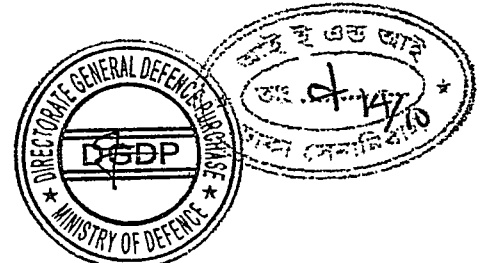


**TECHNICAL SPECIFICATION OF OPTICAL FIBER CABLE (DIFFERENT CORE) (DP-5)**

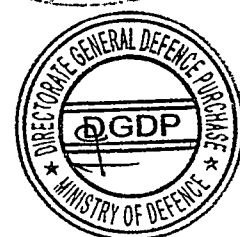
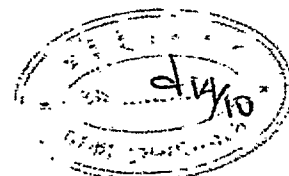
Ser	Description	Required Technical Specification	To be filled up by the bidder
(a)	(b)	(c)	(d)
<b>PART 1: GENERAL SPECIFICATION</b>			
1.	Nomenclature	Optical Fiber Cable	
2.	Brand Name/Make	To be mentioned	
3.	Model	To be mentioned	
4.	Country of Origin	Group A or B Countries	
5.	Country of Manufacture	Group A or B Countries	
6.	Country of Assembly	Group A or B Countries	
7.	Year of Manufacturer	Not before the calendar year of the contract	
8.	Name of Manufacturer with complete address (Addresses, Telephone, Fax, E-mail & Website)	Details to be mentioned	
9.	Name of Principal with complete address (Addresses, Telephone, Fax, E-mail & Website)	Details to be mentioned	
10.	Name of Local Agent with complete address (Addresses, Telephone, Fax, E-mail & Website)	Details to be mentioned	
11.	Color	Black	
12.	<b>Purpose</b>		
	(1) Ideal for outdoor application where deployment and retrieval for reuse is required	To be complied with the following Standard: a. ITU-T.G.652.D / G.657.A or Equivalent b. IEC 61300-3-4 or Equivalent (For Connector)	
	(2) Applicable for military tactical field use and commercial applications which will have strong, lightweight and rugged design	To be confirmed	
<b>PART 2: TECHNICAL SPECIFICATION.</b>			
13.	<b>Fiber Characteristics</b>		
a.	Fiber Type	Single mode	
b.	Description	Loose tube, water swellable tapes or yarns, FRP/Metallic central strength member, corrugated steel tape armoured, 2 x parallel steel wire strength member in the outer sheath and flame retardant LSZH/HDPE sheathed outdoor fibre optic cable	
	<b>(1) Outer Sheth</b>		
	(a) Material and Color	LSZH/HDPE, Black	
	(b) Thickness	Minimum 1.60 mm	
	<b>(2) Loose tube</b>		
	(a) Material	To be mentioned	
	(b) Number of Loose Tube	Minimum 02	
	(C) Diameter of Loose Tube	Minimum 1.60 mm	
	(d) Loose tube filling compound (Jelly)	To be mentioned	

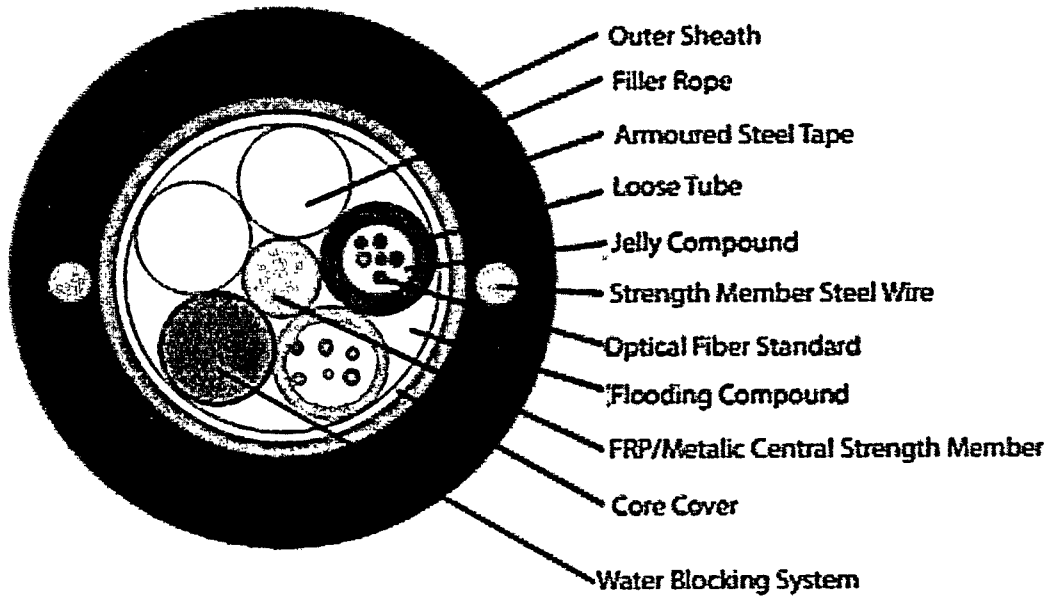


Ser	Description	Required Technical Specification			To be filled up by the bidder
(a)	(b)	(c)			(d)
	<b>(3) Filler</b>				
	(a) Material	To be mentioned			
	(b) Number of Filler	Minimum 03			
	<b>(4) Central Strength Member (CSM)</b>				
	(a) Material	To be mentioned			
	(b) Overall diameter of Central Strength Member (CSM)	Minimum 1.4 mm			
	<b>(5) Wrapping</b>				
	(a) Material	To be mentioned			
	(b) Thickness of Tape	Minimum 0.20 mm			
	(c) Type of Binder	To be mentioned			
	<b>(6) Armoured</b>				
	(a) Material	To be mentioned			
	(b) Thickness of Tape	Minimum 0.25 mm			
	c. Fiber Core	12 Core for FY 2024-2025			
	d. Cable Diameter	6/8/12 Core: 8.9-10.6 mm			
	e. Optical Cladding Diameter	125.0 $\mu\text{m} \pm 0.7 \mu\text{m}$			
	f. Cladding Non-Circularity	$\leq 1.0 \%$			
	g. Coating Diameter	242 $\pm 10 \mu\text{m}$			
14.	<b>Optical Characteristics</b>				
	a. Attenuation Coefficient				
	(1) 1310 nm	$\leq 0.36 \text{ dB/km}$			
	(2) 1550 nm	$\leq 0.22 \text{ dB/km}$ (For short distance)			
	b. Chromatic Dispersion				
	(1) 1285 – 1330 nm	$\leq 3.5 \text{ ps/nm/km}$ (Preferable)			
	(2) 1550 nm	$\leq 18 \text{ ps/nm/km}$			
	c. Zero Dispersion Wavelength (Lambda Zero)	Within 1300 – 1322 nmd			
	d. PMD Coefficient	$\leq 0.2 \text{ ps}/\sqrt{\text{km}}$			
	e. Cable Cutoff Wavelength (nm)	$\leq 1260 \text{ (nm)}$			
15.	<b>Mechanical Characteristics</b>				
	a. Tensile Strength (N)	Fiber count	Short	Long	
		6/8/12	300-600	200-400	
	b. Tensile Load (Kg)	(1) Installation – To be mentioned			
		(2) Operation – To be mentioned			
	c. Bending Radius (mm)	Fiber count	Loaded	Installed	
		6/8/12	20-60	10-30	
16.	<b>Environmental Test</b>				
	a. Operating Temperature	-5°C to +55°C			
	b. Storage Temperature	-10°C to +60°C			
17.	<b>Fiber Optic Cable Assembly</b>				
	a. Cable Construction	Attached as Appx 1 of Anx A			



Ser	Description	Required Technical Specification	To be filled up by the bidder																										
(a)	(b)	(c)	(d)																										
	b. Cable Reel	(1) Portable field deployable tactical fiber optic cable Reel (2) Capacity per Reel: 1 km (3) Weight per Reel: To be mentioned																											
	c. Connectors																												
	(1) Type and Quantity	(a) Tactical/harsh environment connectors: LC, SC and ST (b) No of connectors to be provided as per BOQ																											
	(2) Insertion Loss (dB)	Details to be mentioned																											
	(3) Reflectance (dB)	Details to be mentioned																											
18.	Warranty	02 (Two) Years																											
19.	After Sales Service	05 (Five) Years																											
20.	Model Validity	Minimum 8 (Eight) years from signing of contract																											
21.	List of Standard Accessories (if available)																												
	<table border="1"> <thead> <tr> <th>Ser</th> <th>Nomenclature</th> <th>Brand, Model &amp; Country of Manufacture</th> <th>Qty</th> <th>Rmk</th> </tr> </thead> <tbody> <tr> <td>a.</td> <td>Optical Fiber Cable - 12 Core, 1 km per reel</td> <td>To be mentioned</td> <td>100 Reel</td> <td></td> </tr> <tr> <td>b.</td> <td>LC</td> <td>To be mentioned</td> <td>5 Pair (Per Reel)</td> <td></td> </tr> <tr> <td>c.</td> <td>SC</td> <td>To be mentioned</td> <td>5 Pair (Per Reel)</td> <td></td> </tr> <tr> <td>d.</td> <td>ST</td> <td>To be mentioned</td> <td>2 Pair (Per Reel)</td> <td></td> </tr> </tbody> </table>				Ser	Nomenclature	Brand, Model & Country of Manufacture	Qty	Rmk	a.	Optical Fiber Cable - 12 Core, 1 km per reel	To be mentioned	100 Reel		b.	LC	To be mentioned	5 Pair (Per Reel)		c.	SC	To be mentioned	5 Pair (Per Reel)		d.	ST	To be mentioned	2 Pair (Per Reel)	
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<b>PART-3: TRAINING REQUIREMENT</b>																													
22.	User Training (if applicable)	Not required																											
23.	Operations, Repair and Maintenance Training (if applicable)	Not required																											
24.	Equipment Management Training (if applicable)	Not required																											
25.	Books and Publications for Trainees (if applicable)	Not required																											
<b>PART-4: REPAIR AND MAINTENANCE REQUIREMENT LESS LIST OF SPARES</b>																													
26.	Owners/Operations manual in English (Book Type) including CD/DVD) (if available)	Not required																											
27.	Workshop/Repair manual in English (Book Type) including CD/DVD) (if available)	Not required																											
28.	100% Updated master spare parts catalogue in English (Book Type) including CD/DVD) (if available)	Not required																											
<b>PART-5: LIST OF SPARES</b>																													
29.	List of Spares (if available)	Not required																											
<b>PART-6: TOOLS LIST FOR DIFFERENT LEVEL OF MAINTENANCE</b>																													
30.	a. Analyzer, Measuring, Testing / Fault finding and Diagnostic set (if available)	Not required																											
	b. SST (if available)	Not required																											
	c. SSM (if available)	Not required																											





Picture: Optical Fiber Cable Construction.

