



BHARAT SANCHAR NIGAM LIMITED

(A GOVT.OF INDIA ENTERPRISE)

QUALITY ASSURANCE AND INSPECTION CIRCLE

II Floor, Sanchar Complex, WMS Compound

Jayanagar 5th Block, 9th Main, 47th Cross, Bengaluru-560041

TECHNICAL SPECIFICATION EVALUATION CERTIFICATE

No. TSEC/NCR/B/OFC-85220:2022/288.SEP 2025

Date: 09.09.2025

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED BELOW CONFORMS TO TEC SPECIFICATION (GR) No. MENTIONED BELOW AND IS APPROVED FOR PROCUREMENT BY BSNL. THIS CERTIFICATE IS ISSUED SUBJECT TO THE TERMS AND CONDITIONS STIPULATED IN THE ANNEXURE.

PRODUCT : 6F Aerial Drop Optical Fibre Cable for last mile applications (Short Span) MODEL No: AKSH/BSNL/G657A1/6F AE DROP OFC/01

SPECIFICATION NO.: TEC Standard No. : TEC 85220: 2022 SOFTWARE VERSION: NIL (IF ANY)

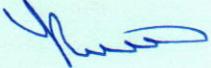
ISSUED ON: 09.09.2025 VALID UP TO : 30.09.2028

ISSUED TO: M/s Aksh Optifibre Limited,
(Manufacturer) F-1080, Phase-III, RIICO Industrial Area,
Bhiwadi 301019, Dist-Alwar, Rajasthan

REMARKS:

- 1) CACT approved Raw Materials as per latest specification only to be used during Bulk Production.
- 2) Cross Sectional Construction as per Annexure-A and details of Raw Material used as per Annexure-B.
- 3) Valid CACT SAC for PBTP shall be submitted during BPC




AGM (TSA)
O/o CGM (QA & I), BNG



ANNEXURE

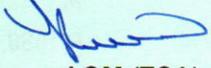
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I. TERMS AND CONDITIONS

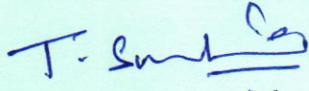
- i) QA & Inspection Circle, may at any time and at its absolute discretion, for any reason(s) as it deems fit, suspend or cancel the TECHNICAL SPECIFICATION EVALUATION CERTIFICATE (TSEC). QA & INSPECTION CIRCLE may modify any of the terms of the Certificate or specifications, which the holder must at his own expense, may comply with.
- ii) **No modification without necessary permission /approval from QA & INSPECTION CIRCLE is permitted in design (Hardware / Software), Engineering and / or facilities in the approved model subsequent to the issue of this certificate. In case of any modification in the product without permission / approval from QA & INSPECTION CIRCLE, the certificate shall be deemed to have been cancelled and may need fresh certificate.**
- iii) During the validity of certificate, QA & INSPECTION CIRCLE reserves the right to inspect and or test this product at any premises where it is in use, or at the place of manufacturer. If any deterioration in performance of the approved product is noticed during inspection and / or testing or its use in BSNL network, the QA & INSPECTION CIRCLE reserves the right to cancel / suspend the Certificate.
- iv) In case of any dispute at any stage during the validity of this Approval the verdict of the Competent Authority of BSNL QA& INSPECTION CIRCLE shall be final and binding on the manufacturer.
- v) The certificate is valid only up to the date mentioned in the certificate and may be renewed, if required, by applying at least three months prior to the expiry date of this certificate. After expiry of the certificate, the case will be treated as a fresh case.
- vi) **Issue of this Approval does not ensure that the BSNL shall necessarily place order on the manufacturer for this product. It merely qualifies the product for meeting the clauses of the relevant Generic Requirement (GR) Specification. Actual supply of equipment to BSNL shall depend on their procurement policy and procedures.**
- vii) The manufacturer shall use raw material in the manufacturing of Optical Fibre cable from the sources approved during the TSEC. For any change in Source / Raw material, approval/consent of QA & Inspection circle should be obtained. The raw material sources shall be CACT/its authorized agency approved.
- viii) The optical fibre cable may be tested by BSNL/MTNL as per the requirements of the GR, the test schedule of the OF cables & raw Material used by the manufacturer. Any deviation & change of the raw materials used other than the alternate approved sources and /or change in the construction, design of the cable shall require a fresh approval (TSEC).

II. Infrastructure Assessment No. CGM (QA&I)/TSEC/NCR/B/IA/25-26/0 Dated valid up to 31.08.2029.


AGM (TSA)
O/o. CGM (QA & I),BNG.

TO,

1. Sr.DDG, TEC, K.L.Bhavan, Janpath, New Delhi.
 2. Sr.DDG (TX)/Sr.DDG (SW), BSNL, Statesmen House, Bara Khamba Road, New Delhi.
 3. PGM (MM), Bharat Sanchar Bhavan, Janpath, New Delhi.
 4. PGM (North), QA & Inspection Circle, New Delhi.
 5. DGM (NCR), QA & Inspection Circle, New Delhi.
 6. DGM (CACT), BSNL QA & Inspection Circle, Bangalore.
 7. DGM (CG), BSNL QA & Inspection Circle, Bangalore.
- Applicant: **M/s Aksh Optifibre Limited, F-1080, Phase-III, RIICO Industrial Area,
Bhiwadi 301019, Dist-Alwar, Rajasthan**
8. Office copy / Guard file.


SDE (TSA)
O/o CGM (QA & I) BNG





ANNEXURE-A

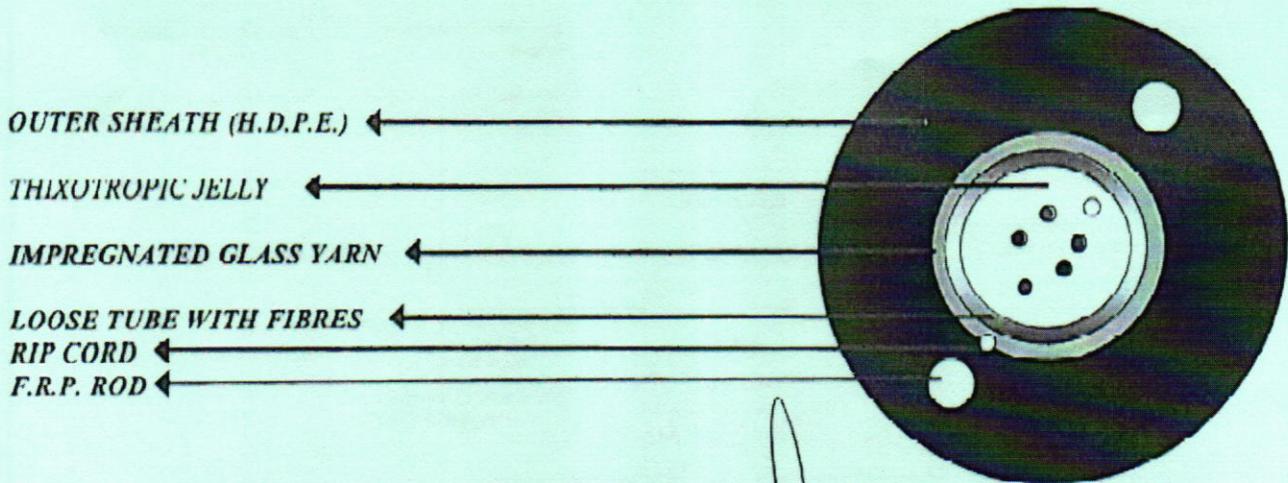
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Date: 09.09.2025

CROSS-SECTIONAL DIAGRAM OF 6F AERIAL DROP OPTICAL FIBRE CABLE FOR LAST MILE APPLICATIONS (SHORT SPAN).

MAKE: M/s AKSH OPTIFIBRE LIMITED, BHIWADI
TEC GR NO.: TEC 85220:2022
MODEL NO.: AKSH /BSNL/G657A1/6F AERIAL DROP OFC/01

CROSS SECTIONAL VIEW OF THE CABLE



उप मंडल अभियन्ता (क्यू०ए०)
क्यू ए० सेन्टर, नई दिल्ली
SDE (QA)
QA Centre New Delhi

No. TSEC/NCR/B/OFC-85220:2022/288,SEP 2025

Date: 09.09.2025

 Name of manufacturer: M/s. Aksh Optifibre Limited, Bhiwadi
 Product Name: 6F AERIAL DROP OPTICAL FIBRE CABLE FOR LAST MILE APPLICATIONS (SHORT SPAN).
 Model No.: AKSH /BSNL/G657A1/6F AERIAL DROP OFC/01

The details of the component parts (Material, Dimensions and quantity etc) are as below:

S. No.	Component Parts	Qty.	Recommended Value	Source / Grade	Measured Value	Remarks
1	Type of Single mode Optical Fibre	-	6F AERIAL DROP OPTICAL FIBRE CABLE FOR LAST MILE APPLICATIONS (SHORT SPAN), (G657A1 Fibre)	SMART LOW BEND ITU-T G657A1 NAT AKSH MADE	SMART LOW BEND ITU-T G657A1 NAT AKSH MADE	-
2	Refractive index of the fibre	-	-	-	1.4670 at 1310 nm & 1.4675 at 1550 nm	-
3	Number of Fibres in the cable	6	6	-	6	-
4	No. of Fibre per Loose Tube	6	6	-	6	-
5	Fibre Colour coding used	-	BLUE, ORANGE, GREEN, BROWN, SLATE & WHITE	-	BLUE, ORANGE, GREEN, BROWN, SLATE & WHITE	-
6	No of Loose Tubes used	1	1	-	1	-
7	Colour coding of the Loose Tubes	-	NATURAL	-	NATURAL	-
8	Material of the Loose Tubes	-	-	M/s Ester Industries Limited, Khatima / ESTOPLAST EP 1115	P B T P	-
9	Inner Diameter of Loose Tube	-	1.7 mm ± 0.1mm	-	1.68-1.73 mm	-
10	Outer Diameter of Loose Tube	-	2.5 ± 0.1 mm	-	2.48-2.53 mm	-
11	Colour of the Dummy	-	-	-	-	-
12	Type & No. of Strength Member(s) and their position	-	-	-	-	-
	I. Solid FRP Rod	-	-	M/s Aksh Optifibre Ltd., Ringus	Solid E.A.A. Coated FRP Rod in centre	-
	II. Flexible impregnated FRP	-	-	-	-	-
	III. Impregnated Glass Roving	-	-	M/s Mangal chand Tubes Pvt. Ltd Type-D (NWB)	M/s Mangal chand Tubes Pvt. Ltd Type-D (NWB)	-
	IV. Aramid Yarn	-	-	-	-	-
13	Size of Strength Member (s)	-	-	-	-	-
I. Solid FRP Rod	-	1.0 ± 0.1 mm	-	-	1.01-1.03 mm	-
II. Flexible impregnated FRP	-	-	-	-	-	-
III. Impregnated Glass Roving	-	4.5-5.5 Kg/Km	-	-	5.24 Kg/Km Min	-
IV. Aramid Yarn	-	-	-	-	-	-
V. Metallic	-	-	-	-	-	-
14	Type & No. of Rip Cord & Colour of Rip Cord	2	2 Nos	M/s. Mangalchand Tubes Pvt Ltd Jaipur / FIBURE Ripcord	2 Nos. of 3 Ply waxed Rip Cords inside the inner sheath	-
15	Type of Outer Sheath Material / Colour	-	H.D.P.E. Black Sheathing (for OF Cables) UV Stabilized	M/s. Sankhla Vinyl Pvt. Ltd., Naroli / HDP333 UV	H.D.P.E. Black(UV)	-
16	Thickness of Inner Sheath	-	≥ 2.0 mm	-	2.08-2.12 mm	-
17	Details of Loose Tube Filling Compound	-	Thixotropic jelly	M/s ITCO Industries Ltd., Hosur / ITCOGEL T 270C	Thixotropic jelly	-
18	Type of Marking on the cable & colour of the marking	-	Hot Foil Indentation Black	-	Hot Foil Indentation Black	-
19	Cable Diameter	-	7.5 ± 0.5 mm	-	7.48-7.60 mm	-
20	Cable Weight	-	45-55 Kg / Km	-	49-51 Kg/Km	-



उप मंडल अभियन्ता (क्यू०ए०)
 क्यू० ए० सेन्टर, नई दिल्ली
 QA (QA)

