



**GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS
TELECOMMUNICATION ENGINEERING CENTRE
Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi-110001**

CERTIFICATE OF DESIGNATION

**Component Approval Centre Telecommunication (CACT), BSNL,
Bengaluru**

has been assessed and designated as Conformity Assessment Body (CAB)
for its facilities at

CACT Complex Doorvani Nagar, Bengaluru- 560016, Karnataka

In the field of Testing

Certificate No. TEC/MRA/CAB/IND-D/93

Issue Date: 22/04/2024

Validity: 22/04/2024 to 21/04/2027

This Certificate remains valid for the Scope of Designation as specified in the Annexure subject to the continued validity of NABL Accreditation and satisfied compliance to the Standards/specifications against which lab has been designated and strict compliance to the relevant terms and conditions of TEC CAB Designation Scheme.

(To see the scope of designation of this laboratory, you may also visit TEC website www.tec.gov.in)

Signed for and on behalf of TEC

**Vijay Dixit
Director (CA)
For Designating Authority
TEC**

**Certificate No: TEC/MRA/CAB/IND-D/93 dated 22/04/2024 issued to
Component Approval Centre Telecommunication (CACT),
BSNL, Bengaluru
CACT Complex Doorvani Nagar, Bengaluru- 560 016**



Validity: - 22/04/2024 to 21/04/2027

Terms & Conditions

This certificate is issued as per the terms and conditions stipulated in the TEC SCHEME FOR DESIGNATING DOMESTIC CONFORMITY ASSESEMENT BODIES AND CERTIFICATION BODIES FOR CONFORMITY ASSESEMENT AND CERTIFICATION OF TELECOMMUNICATION EQUIPMENT ISSUE 3 NO. TEC 04019:2023.

Some of the conditions are reiterated as under:

A. Obligations of the Designated CAB.

1. It shall ensure that it maintains its accreditation status from any recognised Indian accreditation body like NABL during validity period of certificate.
2. It shall follow the stipulated procedures, rules and policies laid down by Designating Authority (DA) or Mutual Recognition Agreement (MRA)* partner for testing and evaluation.
3. In respect of tests for which it is seeking designation, it shall have no interest whatsoever in any business to carry on testing in an unfair or biased manner.
4. It shall fully indemnify DA from and against all liabilities, damages, claims, costs, and expenses incurred or sustained by DA as a result of any action taken or omitted by DA relating to the process of designation.
5. It shall comply with DA's or MRA partner's terms and conditions for designation and recognition as modified from time to time.
6. It shall be under obligation to participate in the online process prescribed by TEC for test and certification against TEC's GR/IR/ER and standards.
7. It shall have a record system which shall have a retention period of at least 5 years for documents related to the equipment testing. It shall maintain all the relevant documents including list of products submitted for testing, product-wise testing and evaluation reports. These documents shall be produced before the DA within seven days, as and when required.
8. It shall ensure the Intellectual Property Rights of the customers in the course of testing by maintaining professional ethics, secrecy and keeping all the product related information confidential.

*Applicable only if recognized by MRA (Mutual Recognition Agreement) partner.

9. It shall notify the DA in writing of occurrence of any of the following incident(s) within 2 weeks of its occurrence
 - a) Cessation of its business of conformity assessment for which it is Designated or accredited
 - b) Changes in its legal, commercial, or Organisational status
 - c) Changes, which may affect continuing compliance with any of the criteria or requirement specified by DA or MRA partner.
 - d) Change of premises

B. REFERENCE TO DESIGNATION STATUS

1. Designated CABs may advertise their designation status with regard to standards or parts thereof which are included in the scope of designation.
2. The advertisement should not imply, or otherwise suggest that DA or MRA Partner has endorsed the product or imply that the designated CAB is an agent or representative of DA or MRA Partner.
3. CABs whose designations have been suspended or withdrawn for any reason, shall discontinue advertisement of their designated status and not make any misleading statements regarding their designation status.

C. POST-DESIGNATION SURVEILLANCE

As and when required, DA shall conduct surveillance assessments and other non-routine assessments on the Designated CABs to ensure that standards of practices are maintained as well as to investigate complaints made against them.

D. SUSPENSION OR WITHDRAWAL OF DESIGNATION

1. DA shall suspend or withdraw the designation of a CAB if
 - a. Its accreditation is withdrawn.
 - b. It is found that the CAB is not complying with the stipulated criteria or requirements.
 - c. It is guilty of any offence involving fraud or dishonesty.
 - d. DA concludes that there is a just cause for withdrawing the designation.
2. A CAB whose designation, and recognition in case of MRA, has been suspended or withdrawn shall be removed from the list of designated CABs, in case it fails to take corrective measures.
3. DA shall keep the designation of a Designated CAB under suspension, until the completion of formal review process.

E. AMENDMENT TO THE SCHEME

DA reserves the rights to amend the scheme, as and when required, for the purpose of streamlining designation process.

SCOPE OF DESIGNATION

(ANNEXURE)

**Laboratory Name: Component Approval Centre Telecommunication (CACT),
BSNL, Bengaluru
CACT Complex Doorvani Nagar, Bengaluru- 560 016**

Certificate Number: TEC/MRA/CAB/IND-D/93

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Validity: 22/04/2024 to 21/04/2027

Last Amended on: ----

Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification	
1	Optical Fibre (Single mode)- ITU-T G.652.D	Geometrical Characteristics	Mode Field Diameter at 1310 nm IEC 60793-1-45	TEC ER No. TEC70112401
			Cladding Diameter IEC 60793-1-20	TEC ER No. TEC70112401
			Cladding non-circularity IEC 60793-1-20	TEC ER No. TEC70112401
			Core Clad concentricity error IEC 60793-1-20	TEC ER No. TEC70112401
			Coating Diameter IEC 60793-1-21	TEC ER No. TEC70112401
			Coating /Cladding concentricity IEC 60793-1-21	TEC ER No. TEC70112401
		Transmission Characteristics	Chromatic Dispersion at 1550 nm IEC 60793-1-42	TEC ER No. TEC70112401
			Chromatic Dispersion at 1625 nm IEC 60793-1-42	TEC ER No. TEC70112401
			Polarization Mode Dispersion Un-cabled Fiber IEC 60793-1-48	TEC ER No. TEC70112401
		Mechanical Characteristics	Fiber Curl IEC 60793-1-34	TEC ER No. TEC70112401
		Environmental Characteristics of Fibre for both color and Un-color fibres	Water Immersion Test: Induced attenuation at 1550 nm due to water immersion at 23 ± 2°C IEC 60793-1-53	TEC ER No. TEC70112401

***The validity of Certificate is up to 21/04/2027 or the continued validity of NABL Accreditation, whichever is earlier.**

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(ANNEXURE)

**Laboratory Name: Component Approval Centre Telecommunication (CACT),
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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	Optical Fibre (Single mode)- ITU-T G.655	Geometrical Characteristics	Mode Field Diameter at 1310 nm IEC 60793-1-45	TEC ER No. TEC70112401
			Cladding Diameter IEC 60793-1-20	TEC ER No. TEC70112401
			Cladding non-circularity IEC 60793-1-20	TEC ER No. TEC70112401
			Core Clad concentricity error IEC 60793-1-20	TEC ER No. TEC70112401
			Coating Diameter IEC 60793-1-21	TEC ER No. TEC70112401
			Coating /Cladding concentricity IEC 60793-1-21	TEC ER No. TEC70112401
		Transmission Characteristics	Chromatic Dispersion at 1550 nm IEC 60793-1-42	TEC ER No. TEC70112401
			Chromatic Dispersion at 1625 nm IEC 60793-1-42	TEC ER No. TEC70112401
			Polarization Mode Dispersion Un-cabled Fiber IEC 60793-1-48	TEC ER No. TEC70112401
		Mechanical Characteristics	Fiber Curl IEC 60793-1-34	TEC ER No. TEC70112401
		Environmental Characteristics of Fibre for both color and Un-color fibres	Water Immersion Test: Induced attenuation at 1550 nm due to water immersion at 23 ± 2°C IEC 60793-1-53	TEC ER No. TEC70112401

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	Optical Fibre (Single mode)- ITU-T G.656	Geometrical Characteristics	Mode Field Diameter at 1310 nm IEC 60793-1-45	TEC ER No. TEC70112401
			Cladding Diameter IEC 60793-1-20	TEC ER No. TEC70112401
			Cladding non-circularity IEC 60793-1-20	TEC ER No. TEC70112401
			Core Clad concentricity error IEC 60793-1-20	TEC ER No. TEC70112401
			Coating Diameter IEC 60793-1-21	TEC ER No. TEC70112401
			Coating /Cladding concentricity IEC 60793-1-21	TEC ER No. TEC70112401
		Transmission Characteristics	Chromatic Dispersion at 1550 nm IEC 60793-1-42	TEC ER No. TEC70112401
			Chromatic Dispersion at 1625 nm IEC 60793-1-42	TEC ER No. TEC70112401
			Polarization Mode Dispersion Un-cabled Fiber IEC 60793-1-48	TEC ER No. TEC70112401
		Mechanical Characteristics	Fiber Curl IEC 60793-1-34	TEC ER No. TEC70112401
		Environmental Characteristics of Fibre for both color and Un-color fibres	Water Immersion Test: Induced attenuation at 1550 nm due to water immersion at 23 ± 2°C IEC 60793-1-53	TEC ER No. TEC70112401

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/ Specification	
	Optical Fibre (Single mode)- ITU-T G.657.A1	Geometrical Characteristics	Mode Field Diameter at 1310 nm IEC 60793-1-45	TEC ER No. TEC70112401
			Cladding Diameter IEC 60793-1-20	TEC ER No. TEC70112401
			Cladding non-circularity IEC 60793-1-20	TEC ER No. TEC70112401
			Core Clad concentricity error IEC 60793-1-20	TEC ER No. TEC70112401
			Coating Diameter (i) 250 μm fibre (ii) 200 μm fibre IEC 60793-1-21	TEC ER No. TEC70112401
			Coating /Cladding concentricity (i) 250 μm fibre (ii) 200μm fibre IEC 60793-1-21	TEC ER No. TEC70112401
		Transmission Characteristics	Chromatic Dispersion at 1550 nm IEC 60793-1-42	TEC ER No. TEC70112401
			Chromatic Dispersion at 1625 nm IEC 60793-1-42	TEC ER No. TEC70112401
			Polarization Mode Dispersion Un-cabled Fiber IEC 60793-1-48	TEC ER No. TEC70112401
		Mechanical Characteristics	Fiber Curl IEC 60793-1-34	TEC ER No. TEC70112401

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	Optical Fibre (Single mode)- ITU-T G.657.A1	Environmental Characteristics of Fibre for both color and Un-color fibres	Water Immersion Test: Induced attenuation at 1550 nm due to water immersion at $23 \pm 2^\circ\text{C}$ IEC 60793-1-53 TEC ER No. TEC70112401
	Optical Fibre (Single mode)- ITU-T G.657.A2	Geometrical Characteristics	Mode Field Diameter at 1310 nm IEC 60793-1-45 TEC ER No. TEC70112401
			Cladding Diameter IEC 60793-1-20 TEC ER No. TEC70112401
			Cladding non-circularity IEC 60793-1-20 TEC ER No. TEC70112401
			Core Clad concentricity error IEC 60793-1-20 TEC ER No. TEC70112401
			Coating Diameter (i) 250 μm fibre (ii) 200 μm fibre IEC 60793-1-21 TEC ER No. TEC70112401
			Coating /Cladding concentricity (i) 250 μm fibre (ii) 200 μm fibre IEC 60793-1-21 TEC ER No. TEC70112401
		Transmission Characteristics	Chromatic Dispersion at 1550 nm IEC 60793-1-42 TEC ER No. TEC70112401
		Chromatic Dispersion at 1625 nm IEC 60793-1-42 TEC ER No. TEC70112401	

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/ Specification	
	Optical Fibre (Single mode)- ITU-T G.657.A2	Transmission Characteristics	Polarization Mode Dispersion Un-cabled Fiber IEC 60793-1-48	TEC ER No. TEC70112401
		Mechanical characteristics	Fiber Curl IEC 60793-1-34	TEC ER No. TEC70112401
		Environmental characteristics of Fibre for both color and Un-color fibres	Water Immersion Test: Induced attenuation at 1550 nm due to water immersion at 23 ± 2°C IEC 60793-1-53	TEC ER No. TEC70112401
	Optical Fibre (Single mode)- ITU-T G.657.B3	Geometrical Characteristics	Mode Field Diameter at 1310 nm IEC 60793-1-45	TEC ER No. TEC70112401
			Cladding Diameter IEC 60793-1-20	TEC ER No. TEC70112401
			Cladding non-circularity IEC 60793-1-20	TEC ER No. TEC70112401
			Core Clad concentricity error IEC 60793-1-20	TEC ER No. TEC70112401
			Coating Diameter IEC 60793-1-21	TEC ER No. TEC70112401
			Coating /Cladding concentricity IEC 60793-1-21	TEC ER No. TEC70112401
		Transmission Characteristics	Chromatic Dispersion at 1550 nm IEC 60793-1-42	TEC ER No. TEC70112401
Chromatic Dispersion at 1625 nm IEC 60793-1-42	TEC ER No. TEC70112401			

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	Optical Fibre (Single mode)- ITU-T G.657.B3	Transmission Characteristics	Polarization Mode Dispersion Un-cabled Fiber IEC 60793-1-48	TEC ER No. TEC70112401
		Mechanical Characteristics	Fiber Curl IEC 60793-1-34	TEC ER No. TEC70112401
		Environmental Characteristics of Fibre for both color and Un-color fibres	Water Immersion Test: Induced attenuation at 1550 nm due to water immersion at 23 ± 2°C IEC 60793-1-53	TEC ER No. TEC70112401
2.	Raw Material for Manufacturing of Optical Fibre Cable	Polybutylene Terephthalate (PBTP) Material	Melt Flow index at 250°C with load of 2.16 Kg ASTM D 1238	TEC GR No. TEC89010:2021
		Polyethylene HDPE (Black)	Melt Flow index at 190°C with load of 2.16 Kg BS 2782 Part (method 720A) ASTM D 1238	TEC GR No. TEC89010:2021
			Density BS 2782 Part 6 (Method 620A-620D) IS 3395 or ASTM D 792 ASTM D 1505 / D 1248	TEC GR No. TEC89010:2021
			Tensile Strength ASTM D 638	TEC GR No. TEC89010:2021
			Elongation at break ASTM D 638	TEC GR No. TEC89010:2021

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	Raw Material for Manufacturing of Optical Fibre Cable	Polyethylene HDPE (Black)	Environmental Stress Cracking Resistance (ESCR), 10% Igepal, 50°C for 1000 hrs (type test) / 48 Hrs (Routine test) ASTM D 1693	TEC GR No. TEC89010:2021
			UV Resistance Test for 4000 Hrs (Type Test) / 2000 Hrs (Routine Test) ASTM 154-12A, IEC 60794-1-22	TEC GR No. TEC89010:2021
		Anti- Tracking Polyethylene	Density BS 2782 Part 6 (Method 620A-620D) ASTM D 792	TEC GR No. TEC89010:2021
			Tensile Strength ASTM D 638	TEC GR No. TEC89010:2021
			Elongation at break ASTM D 638	TEC GR No. TEC89010:2021
			Environmental Stress Cracking Resistance (ESCR), 10% Igepal, 50°C ASTM D 1693	TEC GR No. TEC89010:2021
			UV Resistance Test for 4000 Hrs (Type Test) / 2000 Hrs (Routine Test) ASTM G 154-12a / G155 / IEC 60794-1-22, ISO 4892-2	TEC GR No. TEC89010:2021

***The validity of Certificate is up to 21/04/2027 or the continued validity of NABL Accreditation, whichever is earlier.**

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Validity: 22/04/2024 to 21/04/2027

Last Amended on: ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	Raw Material for Manufacturing of Optical Fibre Cable	LSZH Material (For Sheathing)	Tensile Strength ASTM D 638	TEC GR No. TEC89010:2021
			Elongation at break ASTM D 638	TEC GR No. TEC89010:2021
			Environmental Stress Cracking Resistance (ESCR), 10% Igepal, 50°C ASTM D 1693	TEC GR No. TEC89010:2021
			Hardness ASTM D 2240	TEC GR No. TEC89010:2021

AD (CA), TEC

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