



**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**

**M/s Nemko India (Test Lab) Private Limited, Faridabad**  
has been assessed and designated as Conformity Assessment Body (CAB)  
for its facilities at

**Plot No. 193, Sector-68, IMT Faridabad, Haryana-121 004**

**In the field of Testing**

**Certificate No. TEC/MRA/CAB/IND-D/19-III**

**Issue Date: 01/06/2026**

**Validity: 07/06/2026 to 06/06/2029**

**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](http://www.tec.gov.in))**

**Signed for and on behalf of TEC**

**Sanjeev Kumar Arya  
Director (CA)  
For Designating Authority  
TEC**

**Certificate No: TEC/MRA/CAB/IND-D/19-III dated 01/06/2026 issued to  
M/s Nemko India (Test Lab) Private Limited, Faridabad  
Plot No. 193, Sector-68, IMT Faridabad, Haryana-121004**



**Validity: - 07/06/2026 to 06/06/2029**

### **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:** M/s Nemko India (Test Lab) Private Limited, Faridabad.  
Plot No. 193, Sector-68, IMT Faridabad, Haryana-121004.

**Certificate Number:** TEC/MRA/CAB/IND-D/19-III

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**Validity:** 07/06/2026 to 06/06/2029

**Last Amended on:** ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
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<b>1.</b>	<b>Transmission Terminal Equipment</b>	<b>Parameters link with Product Variant</b>	Channel spacing for 10G or 40G or 100G DWDM (ITU-T G.694.1)	TEC ER No. TEC70122401
		<b>Interface: 2 Mbps – E1</b>	Input Jitter Tolerance for 2 Mbps Int. (ITU-T G.823)	TEC ER No. TEC70122401 & TEC78832401
			Nominal Bit Rate with Tolerance for 2 Mbps Int. (ITU-T G.703)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for 2 Mbps Int. (ITU-T G.823)	TEC ER No. TEC70122401 & TEC78832401
			Pulse Mask for 2 Mbps Int. (ITU-T G.703)	TEC ER No. TEC70122401 & TEC78832401
			<b>Interface: 34 Mbps – E3</b>	Input Jitter Tolerance for 34 Mbps Int. (ITU-T G.823)
		Nominal Bit Rate with Tolerance for 34 Mbps Int. (ITU-T G.703)		TEC ER No. TEC70122401 & TEC78832401
		Output Jitter for 34 Mbps Int. (ITU-T G.823)		TEC ER No. TEC70122401 & TEC78832401
		Pulse Mask for 34 Mbps Int. (ITU-T G.703)		TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: 45 Mbps E1</b>	DC Power (ITU-T G.703)	TEC ER No. TEC70122401 & TEC78832401

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>Transmission Terminal Equipment</b>	<b>Interface: 45 Mbps E1</b>	Input Jitter Tolerance for 45 Mbps Int. (ITU-T G.824)	TEC ER No. TEC70122401 & TEC78832401
			Nominal Bit Rate with Tolerance for 45 Mbps Int. (ITU-T G.703)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for 45 Mbps Int. (ITU-T G.824)	TEC ER No. TEC70122401 & TEC78832401
			Pulse Mask for 45 Mbps Int. (ITU-T G.703)	TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: STM-1 Electrical</b>	Input Jitter Tolerance STM-1 Electrical (ITU-T G.825)	TEC ER No. TEC70122401 & TEC78832401
			Nominal Bit Rate with Tolerance STM-1 Electrical Int. (ITU-T G.703)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for STM-1 Electrical Int. (ITU-T G.825)	TEC ER No. TEC70122401 & TEC78832401
			Pulse Mask for STM-1 Electrical Int. (ITU-T G.703)	TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: STM-1 Optical</b>	Input Jitter Tolerance for STM-1 Opt (ITU-T G.825)	TEC ER No. TEC70122401 & TEC78832401

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**Last Amended on:** ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>Transmission Terminal Equipment</b>	<b>Interface: STM-1 Optical</b>	Mean Launched Power for STM-1 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Operating Wavelength Range for STM-1 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for STM-1 Opt Int. (ITU-T G.783)	TEC ER No. TEC70122401 & TEC78832401
			Receiver Overload for STM-1 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Receiver Sensitivity for STM-1 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: STM-4 Optical</b>	Input Jitter Tolerance for STM-4 Opt (ITU-T G.825)	TEC ER No. TEC70122401 & TEC78832401
			Mean Launched Power for STM-4 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Operating Wavelength Range for STM-4 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for STM-4 Opt Int. (ITU-T G.783)	TEC ER No. TEC70122401 & TEC78832401

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>Transmission Terminal Equipment</b>	<b>Interface: STM-4 Optical</b>	Receiver Overload for STM-4 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Receiver Sensitivity for STM-4 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: STM-16 Optical</b>	Input Jitter Tolerance for STM-16 Opt (ITU-T G.825)	TEC ER No. TEC70122401 & TEC78832401
			Mean Launched Power for STM-16 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Operating Wavelength Range for STM-16 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for STM-16 Opt Int. (ITU-T G.783)	TEC ER No. TEC70122401 & TEC78832401
			Receiver Overload for STM-16 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
			Receiver Sensitivity for STM-16 Opt Int. (ITU-T G.957)	TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: STM-64 Optical</b>	Input Jitter Tolerance for STM-64 Opt (ITU-T G.825)	TEC ER No. TEC70122401 & TEC78832401

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>Transmission Terminal Equipment</b>	<b>Interface: STM-64 Optical</b>	Mean Launched Power for STM-64 Opt Int. (ITU-T G.691)	TEC ER No. TEC70122401 & TEC78832401
			Nominal Bit Rate with Tolerance STM-64 Opt Int. (ITU-T G.707)	TEC ER No. TEC70122401 & TEC78832401
			Operating Wavelength Range for STM-64 Opt Int. (ITU-T G.691)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for STM-64 Opt Int. (ITU-T G.783)	TEC ER No. TEC70122401 & TEC78832401
			Receiver Overload for STM-64 Opt Int. (ITU-T G.691)	TEC ER No. TEC70122401 & TEC78832401
			Receiver Sensitivity for STM-64 Opt Int. (ITU-T G.691)	TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: OTU-1</b>	Input Jitter Tolerance for OTU-1 Int. (ITU-T G.8251)	TEC ER No. TEC70122401 & TEC78832401
			Nominal Bit Rate with Tolerance OTU-1 Int. (ITU-T G.709)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for OTU-1 Int. (ITU-T G.8251)	TEC ER No. TEC70122401 & TEC78832401

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>Transmission Terminal Equipment</b>	<b>Interface: OTU-1</b>	Central Frequency for OTU-1 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401
			Mean Total Input Power for OTU-1 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401
			Mean Total Output Power for OTU-1 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401
			Receiver Sensitivity for OTU-1 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: OTU-2</b>	Input Jitter Tolerance for OTU-2 Int. (ITU-T G.8251)	TEC ER No. TEC70122401 & TEC78832401
			Nominal Bit Rate with Tolerance OTU-2 Int. (ITU-T G.709)	TEC ER No. TEC70122401 & TEC78832401
			Output Jitter for OTU-2 Int. (ITU-T G.8251)	TEC ER No. TEC70122401 & TEC78832401
			Central frequency for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401
			Mean Total Input Power for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>Transmission Terminal Equipment</b>	<b>Interface: OTU-2</b>	Mean Total Output Power for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401
			Minimum Receiver Overload for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401
			Receiver Sensitivity for OTU-2 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401 & TEC78832401
		<b>Interface: OTU-3</b>	Nominal Bit Rate with Tolerance OTU-3 Int. (ITU-T G.709)	TEC ER No. TEC70122401
			Central Frequency for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401
			Mean Total Input Power for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401
			Mean Total Output Power for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401
			Minimum Receiver Overload for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401
			Receiver Sensitivity for OTU-3 Int. ITU-T G.959.1 G.693	TEC ER No. TEC70122401

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**Validity:** 07/06/2026 to 06/06/2029

**Last Amended on:** ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>Transmission Terminal Equipment</b>	<b>Interface: OTU-4</b>	Nominal Bit Rate with Tolerance OTU-4 Int. (ITU-T G.709)	TEC ER No. TEC70122401
			Central Frequency for OTU-4 Int. ITU-T G.959.1 G.695.1	TEC ER No. TEC70122401
			Mean Total Input Power for OTU-4 Int. ITU-T G.959.1 G.695.1	TEC ER No. TEC70122401
			Mean Total Output Power for OTU-4 Int. ITU-T G.959.1 G.695.1	TEC ER No. TEC70122401
			Receiver Sensitivity for OTU-4 Int. ITU-T G.959.1 G.695.1	TEC ER No. TEC70122401
<b>2.</b>	<b>IoT Gateway</b>	<b>Basic RF Requirements for NFC- Interface</b>	Transmitter Radiated Spurious Domain Limit > 30MHz ETSI EN 300 330 V2.1.1 (2017-02)	TEC ER No. TEC24492408
			Receiver Spurious Emissions (Radiated) ETSI EN 300 330 V2.1.1 (2017-02)	TEC ER No. TEC24492408
<b>3.</b>	<b>Radio Broadcast Receiver RBR</b>	<b>Parameters link with Product Variant</b>	Receiver Blocking ETSI EN 303 413 V1.2.1 Clause 4.2.1	TEC ER No. TEC50012407

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**Last Amended on:** ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
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	<b>Radio Broadcast Receiver RBR</b>	<b>Parameters link with Product Variant</b>	Receiver Spurious Emissions ETSI EN 303 413 V1.2.1 Clause 4.2.2	TEC ER No. TEC50012407
			Broadcast Sound Receivers ETSI EN 303 345 V1.1.7 Clause 4.2.1	TEC ER No. TEC50012407
			AM testing ETSI EN 303 345 V1.1.7 Clause 4.2.3.1	TEC ER No. TEC50012407
			Broadcast Radio Frequency Bands ETSI EN 303 345 V1.1.7 Clause 4.2.2	TEC ER No. TEC50012407
			FM Testing ETSI EN 303 345 V1.1.7 Clause 4.2.3.2	TEC ER No. TEC50012407
			Sensitivity ETSI EN 303 345 V1.1.7 Clause 4.2.4	TEC ER No. TEC50012407
			Unwanted Emissions in the Spurious Domain ETSI EN 303 345 V1.1.7 Clause 4.2.6	TEC ER No. TEC50012407
			Adjacent Channel Selectivity and Blocking ETSI EN 303 345 V1.1.7 Clause 4.2.5	TEC ER No. TEC50012407

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**Last Amended on:** ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
<b>4.</b>	<b>PON Family of Broadband Equipment</b>	<b>Parameters link with product Variant</b>	
		Latency and Frame loss of PON RFC 2544	TEC ER No. TEC14762505
		Latency and Frame loss of PON RFC 2544	TEC ER No. TEC14762505
		MAC Address Learning and Aging Control G.984.1, G.987.2, G.989.2, IEEE 802.3ah, IEEE 802.3av, G.9807.1, IEEE 802.1Q	TEC ER No. TEC14762505
		MAC Address Limitation in PON IEEE 802.3	TEC ER No. TEC14762505
		MAC Learning Support at OLT IEEE 802.3	TEC ER No. TEC14762505
		Minimum Two Classification G.984.3, IEEE 802.3ah, G.987.2, G.9807.1, G989.2, IEEE 802.3av	TEC ER No. TEC14762505
Minimum Guaranteed bandwidth in PON G.984.3, IEEE 802.3ah, G.987.2, G.9807.1, G989.2, IEEE 802.3av	TEC ER No. TEC14762505		

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**GOVERNMENT OF INDIA**  
**MINISTRY OF COMMUNICATIONS**  
**DEPARTMENT OF TELECOMMUNICATIONS**  
**TELECOMMUNICATION ENGINEERING CENTRE**  
Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi - 110 001



**SCOPE OF DESIGNATION**  
**(ANNEXURE)**

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**Last Amended on:** ----

Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification
	PON Family of Broadband Equipment	Parameters link with product Variant	Maximum Bandwidth Limiting in PON G.984.3, IEEE 802.3ah, G.987.2, G.9807.1, G989.2, IEEE 802.3av
			Password Based Authentication in PON G.984.3 IEEE802.3
			Port-id Based VLAN Support at OLT G.984.1, G.987.1, G.989.2, IEEE 802.3ah, IEEE 802.3av, G.9807.1, G.984.5, IEEE 802.1Q
			Switch Fabric Throughput Capability G.984.1, IEEE 802.3ah, G.987.2, G.9807.1, G.984.5, G.989.2, IEEE 802.3av, IEEE 802.1Q
			VLAN Stacking to Network Support at OLT IEEE 802.1ad and IEEE 802.1Q
		<b>Interface: FE</b>	Link Speed and Auto Negotiation for FE IEEE 802.3
		<b>Interface: GE</b>	Link Speed and Auto Negotiation for GE IEEE 802.3
		TEC ER No. TEC14762505	
		TEC ER No. TEC14762505	
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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>PON Family of Broadband Equipment</b>	<b>Interface: EPON</b>	Operating Wavelength Transmitter IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762505
			Operating Wavelength Receiver IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762505
			Opt Output Power at OLT IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762505
			Opt Output Power at ONT IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762505
			Receiver Sensitivity at OLT IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762505
			Receiver Sensitivity at ONT IEEE 802.3ah (Annex. J2)	TEC ER No. TEC14762505
			Throughput (G.984.1 RFC 2544 Annex-J3)	TEC ER No. TEC14762505
		<b>Interface: GPON</b>	Operating Wavelength Trans. (G.984.2. Annex-J2)	TEC ER No. TEC14762505
			Operating Wavelength Recv. (G.984.2. Annex-J2)	TEC ER No. TEC14762505
			Opt Output Power at OLT (G.984.2. Annex-J2)	TEC ER No. TEC14762505
			Opt Output Power at ONT (G.984.2. Annex-J2)	TEC ER No. TEC14762505
			Receiver Sensitivity at OLT (G.984.2. Annex-J2)	TEC ER No. TEC14762505

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## SCOPE OF DESIGNATION

### (ANNEXURE)

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Plot No. 193, Sector-68, IMT Faridabad, Haryana-121004.

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>PON Family of Broadband Equipment</b>	<b>Interface: GPON</b>	Receiver Sensitivity at ONT (G.984.2. Annex-J2)	TEC ER No. TEC14762505
			Throughput (G.984.1 RFC 2544 Annex-J3)	TEC ER No. TEC14762505
		<b>Interface: XGPON</b>	Operating Wavelength Recv. (G.987.2. Annex-J2)	TEC ER No. TEC14762505
			Operating Wavelength Trans (G.987.2. Annex-J2)	TEC ER No. TEC14762505
			Opt Output Power at OLT (G.987.2. Annex-J2)	TEC ER No. TEC14762505
			Opt Output Power at ONT (G.987.2. Annex-J2)	TEC ER No. TEC14762505
			Receiver Sensitivity at OLT (G.987.2. Annex-J2)	TEC ER No. TEC14762505
			Receiver Sensitivity at ONT (G.987.2. Annex-J2)	TEC ER No. TEC14762505
			Throughput (G.987.1 RFC 2544 Annex-J3)	TEC ER No. TEC14762505
			<b>Interface: XGSPON</b>	Operating Wavelength Trans (G.9807.1. Annex-J2)
		Operating Wavelength Recv. (G.9807.1. Annex-J2)		TEC ER No. TEC14762505
		Opt Output Power at OLT (G.9807.1. Annex-J2)		TEC ER No. TEC14762505
		Opt Output Power at ONT (G.9807.1. Annex-J2)		TEC ER No. TEC14762505
		Receiver Sensitivity at OLT (G.9807.1. Annex-J2)		TEC ER No. TEC14762505

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>PON Family of Broadband Equipment</b>	<b>Interface: XGSPON</b>	Receiver Sensitivity at ONT (G.9807.1. Annex-J2)	TEC ER No. TEC14762505
			Throughput (G.9807.1 RFC 2544 Annex-J3)	TEC ER No. TEC14762505
		<b>Interface: NGPON2</b>	Operating Wavelength Recv. (G.989.2. Annex-J2)	TEC ER No. TEC14762505
			Operating Wavelength Trans. (G.989.2. Annex-J2)	TEC ER No. TEC14762505
			Opt Output Power at OLT (G.989.2. Annex-J2)	TEC ER No. TEC14762505
			Opt Output Power at ONT (G.989.2. Annex-J2)	TEC ER No. TEC14762505
			Receiver Sensitivity at OLT (G.989.2. Annex-J2)	TEC ER No. TEC14762505
			Receiver Sensitivity at ONT (G.989.2. Annex-J2)	TEC ER No. TEC14762505
			Throughput (G.989.2 Annex- J3)	TEC ER No. TEC14762505
		<b>Interface: 10 GEPON</b>	Operating Wavelength in Downstream Direction IEEE 802.3av. Annex-J2	TEC ER No. TEC14762505
			Operating Wavelength in Upstream Direction IEEE 802.3av. Annex-J2	TEC ER No. TEC14762505
			Opt Output Power at OLT IEEE 802.3av. Annex-J2	TEC ER No. TEC14762505

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	PON Family of Broadband Equipment	Interface: 10 GEAPON	Opt Output Power at ONT IEEE 802.3av. Annex-J2	TEC ER No. TEC14762505
			Receiver Sensitivity at OLT IEEE 802.3av. Annex-J2	TEC ER No. TEC14762505
			Receiver Sensitivity at ONT IEEE 802.3av. Annex-J2	TEC ER No. TEC14762505
			Throughput IEEE 802.3av. RFC 2544. Annex-J3	TEC ER No. TEC14762505
5.	LAN Switch	Parameters link with Product Variant	MAC Learning and Packet Forwarding Annex-P11	TEC ER No. TEC37942410
			Spanning Tree Protocol IEEE 802.1d	TEC ER No. TEC37942410
			Interface: 1G Optical Ethernet	Average Launch Power IEEE 802.3z Cl 38, Annex-H
		Interface: 10G Optical Ethernet	Receiver Sensitivity IEEE 802.3z Cl 38, Annex-H	TEC ER No. TEC37942410
			Wavelength IEEE 802.3z Cl 38, Annex-H	TEC ER No. TEC37942410
			Average Launch Power IEEE 802.3ae Cl 52, Annex-H	TEC ER No. TEC37942410
			Receiver Sensitivity IEEE 802.3ae Cl 52, Annex-H	TEC ER No. TEC37942410
			Wavelength IEEE 802.3ae Cl 52, Annex-H	TEC ER No. TEC37942410

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**GOVERNMENT OF INDIA**  
**MINISTRY OF COMMUNICATIONS**  
**DEPARTMENT OF TELECOMMUNICATIONS**  
**TELECOMMUNICATION ENGINEERING CENTRE**  
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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	LAN Switch	Interface: 100G Optical Ethernet	Average Launch Power IEEE 802.3ba Cl 86,88, Annex-H	TEC ER No. TEC37942410
			Receiver Sensitivity IEEE 802.3ba Cl 86,88, Annex-H	TEC ER No. TEC37942410
			Wavelength IEEE 802.3ba Cl 86,88, Annex-H	TEC ER No. TEC37942410
		Interface: 40G Optical Ethernet	Average Launch Power IEEE 802.3ba Cl 86,87, Annex-H	TEC ER No. TEC37942410
			Receiver Sensitivity IEEE 802.3ba Cl 86,87, Annex-H	TEC ER No. TEC37942410
			Wavelength IEEE 802.3ba Cl 86,87, Annex-H	TEC ER No. TEC37942410
		Interface: Fast Ethernet Optical	Average Launch Power IEEE 802.3u, Annex-H	TEC ER No. TEC37942410
			Receiver Sensitivity IEEE 802.3u, Annex-H	TEC ER No. TEC37942410
			Wavelength IEEE 802.3u, Annex-H	TEC ER No. TEC37942410
6.	Router	Parameters link with Product Variant	PPPoE RFC2516, Annex-P11	TEC ER No. TEC37682410
			TCP Parameters RFC 793, Annex-P11	TEC ER No. TEC37682410

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Sl. No.	Telecom Equipment/Product	Test Parameter or Type of Testing	Standard/Specification	
	<b>Router</b>	<b>Parameters link with Product Variant</b>	IPv4 parameters Set-D RFC 791 Annex-P11	TEC ER No. TEC37682410
			Dynamic routing Annex-P11	TEC ER No. TEC37682410
			Manageability SNMP v2 or V3 RFC 3410 3416 Annex-P11	TEC ER No. TEC37682410
			Static Routing Annex-P11	TEC ER No. TEC37682410
		<b>Interface: 25G Optical Ethernet</b>	Average Launch Power IEEE 802.3 Cl 114, Annex-H	TEC ER No. TEC37682410
			Receiver Sensitivity IEEE 802.3 Cl 114, Annex-H	TEC ER No. TEC37682410
			Wavelength IEEE 802.3 Cl 114, Annex-H	TEC ER No. TEC37682410
		<b>Interface: 200G Optical Ethernet</b>	Average Launch Power IEEE 802.3cn Cl 121, 122, Annex-H	TEC ER No. TEC37682410
			Receiver Sensitivity IEEE 802.3cn Cl 121, 122, Annex-H	TEC ER No. TEC37682410
			Wavelength IEEE 802.3cn Cl 121, 122, Annex-H	TEC ER No. TEC37682410
		<b>Interface: 400G Optical Ethernet</b>	Average Launch Power IEEE 802.3cn Cl 122,124, Annex-H	TEC ER No. TEC37682410

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Sl. No.	Telecom Equipment/ Product	Test Parameter or Type of Testing	Standard/ Specification	
	<b>Router</b>	<b>Interface: 400G Optical Ethernet</b>	Receiver Sensitivity IEEE 802.3cn Cl 122,124, Annex-H	TEC ER No. TEC37682410
			Wavelength IEEE 802.3cn Cl 122,124, Annex-H	TEC ER No. TEC37682410
		<b>Interface: 50G Optical Ethernet</b>	Average Launch Power IEEE 802.3cn	TEC ER No. TEC37682410
			Receiver Sensitivity IEEE 802.3cn	TEC ER No. TEC37682410
			Wavelength IEEE 802.3cn	TEC ER No. TEC37682410
		<b>7.</b>	<b>IP Security Equipment</b>	<b>Parameters link with Product Variant</b>
NAT Functional Test Annex-P11	TEC ER No. TEC34732602			
Policy Functional test Annex-P11	TEC ER No. TEC34732602			

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