



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 STERLITE TECHNOLOGIES LTD. (OFC QUALITY ASSURANCE LABORATORY), SILVASA

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

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396230, U. T. of Dadra and Nagar Haveli

In the field of Testing

Certificate No. TEC/MRA/CAB/IND-D/83

Issue Date: 11/09/2025 Validity: 30/08/2025 to 29/08/2028

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

Sanjeev Kumar Arya Director (CA) For Designating Authority TEC

Certificate No: TEC/MRA/CAB/IND-D/83 dated 11/09/2025 issued to
M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory), Silvasa
Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,
U. T. of Dadra and Nagar Haveli.

Validity: - 30/08/2025 to 29/08/2028

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 2 NO. TEC/DES-01/02.DEC.2017.

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.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 1 of 104

| Sl. No. | Telecom Equipment/ Product | Test Paramete | Standard/ Specification | |
|------------|----------------------------------|------------------------|--|---|
| 1 | Optical Fibre (Single Mode) | Mode Field Diameter | for 1310 nm for Optical Fibre (ITU-T G.652.D) IEC 60793-1-45 for 1550 nm for Optical Fibre | TEC ER No. TEC70112401 TEC ER No. |
| | | | (ITU-T G.655) IEC 60793-1-45 | TEC70112401 |
| | | | for 1550 nm for Optical Fibre (ITU-T G.656) IEC 60793-1-45 | TEC ER No. TEC70112401 |
| | | | for 1310 nm for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-45 | TEC ER No. TEC70112401 |
| | | | for 1310 nm for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-45 | TEC ER No. TEC70112401 |
| | | | for 1310 nm for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-45 | TEC ER No. TEC70112401 |
| | | Cladding Diameter | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-20 for Optical Fibre (ITU-T G.655) | TEC ER No. TEC70112401 TEC ER No. |
| | | | IEC 60793-1-20 for Optical Fibre (ITU-T G.656) IEC 60793-1-20 | TEC70112401 TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-20 | TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-20 | TEC ER No. TEC70112401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 2 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|---|---|
| | Optical Fibre (Single Mode) | Cladding Diameter Cladding Non- Circularity Core Clad Concentricity error | for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-20 for Optical Fibre (ITU-T G.652.D) IEC 60793-1-20 for Optical Fibre (ITU-T G.655) IEC 60793-1-20 for Optical Fibre (ITU-T G.656) IEC 60793-1-20 for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-20 for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-20 for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-20 for Optical Fibre (ITU-T G.652.D) IEC 60793-1-20, IEC 60793-2-50 for Optical Fibre (ITU-T G.655) | TEC ER No. TEC70112401 |
| | | | IEC 60793-1-20, IEC 60793-2-50 for Optical Fibre (ITU-T G.656) IEC 60793-1-20, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-20, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-20, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-20, IEC 60793-2-50 | TEC ER No. TEC70112401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 3 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|---|--|--|
| | | Coating/ Cladding Concentricity Coating Diameter | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.655) IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.656) IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A1) (i) 200 μm fibre (ii) 250 μm fibre IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A2) (i) 200 μm fibre (ii) 250 μm fibre (ii) 250 μm fibre IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.652.D) IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.655) IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.656) IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.656) IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A1) (i) 200 μm fibre (ii) 250 μm fibre | TEC ER No. TEC70112401 |
| | | | IEC 60793-1-21, IEC 60793-2-50 | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 4 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|-------------------------------------|--|--|
| | Optical Fibre (Single Mode) | Coating Diameter | for Optical Fibre (ITU-T G.657.A2) (i) 200 µm fibre (ii) 250 µm fibre IEC 60793-1-21, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 |
| | | Attenuation of Uncabled Fibre | for Optical Fibre (ITU-T G.652.D) (i) at 1310 nm (ii) at 1550 nm (iii) at 1490 nm (iv) at 1270 nm (v) at 1625 nm (vi) water peak attenuation at 1380 to 1390 nm IEC 60793-1-40 for Optical Fibre (ITU-T G.655) (i) at 1550 nm (ii) at 1625 nm IEC 60793-1-40 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.656) (i) at 1460 nm (ii) at 1550 nm (iii) at 1625 nm (iv) at 1383 nm IEC 60793-1-40 | TEC ER No. TEC70112401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 5 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | r or Type of Testing | Standard/ Specification |
|------------|----------------------------------|-------------------------------|--|--|
| | Optical Fibre (Single Mode) | Attenuation of Uncabled Fibre | for Optical Fibre (ITU-T G.657.A1) (i) at 1310 nm (ii) at 1550 nm (iii) at 1490 nm (iv) at 1270 nm (v) at 1625 nm (vi) water peak attenuation at 1380 to 1390 nm IEC 60793-1-40 for Optical Fibre (ITU-T G.657.A2) (i) at 1310 nm (ii) at 1550 nm (iii) at 1490 nm (iv) at 1270 nm (v) at 1625 nm (vi) water peak attenuation at 1380 to 1390 nm IEC 60793-1-40 for Optical Fibre (ITU-T G.657.B3) (i) at 1310 nm (ii) at 1550 nm (iii) at 1490 nm (iv) at 1270 nm (v) at 1625 nm (vi) water peak attenuation at 1380 to 1390 nm (vi) water peak attenuation at 1380 to 1390 nm (vi) water peak attenuation at 1380 to 1390 nm (vi) water peak attenuation at 1380 to 1390 nm IEC 60793-1-40 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 TEC ER No. TEC70112401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 6 of 104

| Telecom | Test Parameter | r or Type of Testing | Standard/ |
|---------------|-------------------|---|-------------------------|
| Equipment/ | | | Specification |
| Product | | | |
| | T ~~ . | | T |
| - | | 1 | TEC ER No. |
| (Single Mode) | Dispersion | | TEC70112401 |
| | | ` ' | |
| | | | |
| | | ` ' | |
| | | · · | |
| | | ` ` ' | TEC ER No. |
| | | | TEC70112401 |
| | | ` ' | |
| | | ` ' | |
| | | (iv) in 1270-1340 nm band | |
| | | IEC 60793-1-42, IEC 60793-2-50 | |
| | | | TEC ER No. |
| | | | TEC70112401 |
| | | (ii) at 1625 nm | |
| | | ` ' | |
| | | (iv) in 1270-1340 nm band | |
| | | IEC 60793-1-42, IEC 60793-2-50 | |
| | | for Optical Fibre (ITU-T G.657.B3) | TEC ER No. |
| | | (i) at 1550 nm | TEC70112401 |
| | | (ii) at 1625 nm | |
| | | (iii) in 1285-1330 nm band | |
| | | (iv) in 1270-1340 nm band | |
| | | IEC 60793-1-42, IEC 60793-2-50 | |
| | Zero | for Optical Fibre (ITU-T G.652.D) | TEC ER No. |
| | Dispersion | IEC 60793-1-42 | TEC70112401 |
| | Slope | for Optical Fibre (ITU-T G.657.A1) | TEC ER No. |
| | | IEC 60793-1-42 | TEC70112401 |
| | Equipment/ | Equipment/Product Optical Fibre (Single Mode) Chromatic Dispersion Zero Dispersion | Chromatic (Single Mode) |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 7 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|--|--|
| | Optical Fibre (Single Mode) | Zero Dispersion Slope | for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-42 for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-42 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 |
| | | Zero Dispersion Wavelength range | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-42 for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-42 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-42 for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-42 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 |
| | | Polarization Mode Dispersion for Uncabled | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-48, IEC 60793-2-50 for Optical Fibre (ITU-T G.655) IEC 60793-1-48, IEC 60793-2-50 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 |
| | | Fiber | for Optical Fibre(ITU-T G.656) IEC 60793-1-48, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-48, IEC 60793-2-50 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-48, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.B3) | TEC ER No. TEC70112401 TEC ER No. |
| | | Cable Cut off Wavelength | IEC 60793-1-48, IEC 60793-2-50 for Optical Fibre (ITU-T G.652.D) IEC 60793-1-44, IEC 60793-2-50 | TEC70112401 TEC ER No. TEC70112401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 8 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|---|--|---|
| | Optical Fibre (Single Mode) | Cable Cut off Wavelength | for Optical Fibre (ITU-T G.655) IEC 60793-1-44, IEC 60793-2-50 for Optical Fibre (ITU-T G.656) IEC 60793-1-44, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-44, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-44, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.B3) | TEC ER No. TEC70112401 TEC ER No. |
| | | Fibre Cutoff Wavelength for Fibre used in Patch cords & Pig-tails | IEC 60793-1-44, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-44 for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-44 for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-44 | TEC70112401 TEC ER No. TEC70112401 TEC ER No. TEC70112401 TEC ER No. TEC70112401 |
| | | Fibre Macro bend loss (Change in Attenuation When fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel) | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-47, IEC 60793-2-50 for Optical Fibre (ITU-T G.655) IEC 60793-1-47, IEC 60793-2-50 for Optical Fibre(ITU-T G.656) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 TEC ER No. TEC70112401 TEC ER No. TEC70112401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 9 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|---|--|---------------------------|
| | Optical Fibre (Single Mode) | Fibre Macro bend loss (Change in | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | Attenuation When fibre is coiled with 1 turn around | for Optical Fibre (ITU-T G.655) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | 32 ± 0.5 mm diameter mandrel) | for Optical Fibre(ITU-T G.656) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | Fibre Macro bend loss (Change in | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | Attenuation When fibre is coiled with 100 turns on | | |
| | | 50 ± 0.5 mm diameter mandrel) | | |
| | | Fibre Macro bend loss (Change in | for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | Attenuation When fibre is coiled with 10 | for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | turns on 15 mm radius mandrel) | | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 10 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|--|--|-----------------------------------|
| | Optical Fibre (Single Mode) | Fibre Macro bend loss (Change in Attenuation | for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | When fibre is coiled with 1 turn on 10 | for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-47, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.B3) | TEC ER No. TEC70112401 TEC ER No. |
| | | mm radius mandrel) Fibre Macro | IEC 60793-1-47, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.A2) | TEC ER No. TEC70112401 TEC ER No. |
| | | bend loss (Change in Attenuation | IEC 60793-1-47, IEC 60793-2-50 | TEC70112401 |
| | | When fibre is coiled with 1 turn on 7.5 mm radius mandrel) | for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | Fibre Macro bend loss (Change in Attenuation When fibre is coiled with 1 turn on 5 mm radius mandrel | for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-47, IEC 60793-2-50 | TEC ER No. TEC70112401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 11 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---|--|----------------------------|
| | Optical Fibre (Single Mode) | Peak Stripability | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-32, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | Force to Remove Primary Coating of the fiber (Unaged, Water aged, Damp Heat | for Optical Fibre (ITU-T G.655) IEC 60793-1-32, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.656) IEC 60793-1-32, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.657.A1) (i) 200 µm fibre (ii) 250 µm fibre IEC 60793-1-32, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | aged) | for Optical Fibre (ITU-T G.657.A2) (i) 200 µm fibre (ii) 250 µm fibre | TEC ER No. TEC70112401 |
| | | | IEC 60793-1-32, IEC 60793-2-50 for Optical Fibre (ITU-T G.657.B3) IEC 60793-1-32, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | Fibre Curl | for Optical Fibre (ITU-T G.652.D) IEC 60793-1-34, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.655) IEC 60793-1-34, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.656) IEC 60793-1-34, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.657.A1) IEC 60793-1-34, IEC 60793-2-50 | TEC ER No. TEC70112401 |
| | | | for Optical Fibre (ITU-T G.657.A2) IEC 60793-1-34, IEC 60793-2-50 | TEC ER No. TEC70112401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 12 of 104

| ation |
|---------------|
| No. 12401 |
| No. 0:2021 |
|] |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 13 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|-----------------------------------|---|---|
| | Raw material for Manufacturin g of Optical Fibre Cable | Cladding Diameter | Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D at 1310 nm IEC 60793-1-45 Section-I, Type-II, Single Mode | TEC GR No. TEC89010:2021 TEC GR No. |
| | | | Optical Fibre as per ITU-T G.655 at 1550 nm IEC 60793-1-45 | TEC89010:2021 TEC GR No. |
| | | | Optical Fibre as per ITU-T G.656 at 1550 nm IEC 60793-1-45 | TEC89010:2021 |
| | | | Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 at 1310 nm IEC 60793-1-45 | TEC GR No. TEC89010:2021 |
| | | | , ,, , | TEC GR No. TEC89010:2021 |
| | | | , ,, , | TEC GR No. TEC89010:2021 |
| | | Cladding Non- Circularity | Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D IEC 60793-1-20 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 IEC 60793-1-20 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 14 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|--|-------------------------------------|---|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Cladding Non- Circularity | Optical Fibre as per ITU-T G.657.A1 IEC 60793-1-20 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 IEC 60793-1-20 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | | , , , | TEC GR No. TEC89010:2021 |
| | | Core Clad Concentricity error | Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D IEC 60793-1-20, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 IEC 60793-1-20, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-III, Single Mode Optical Fibre as per ITU-T G.656 IEC 60793-1-20, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 IEC 60793-1-20, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | IEC 60793-1-20, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-20, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 15 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---------------------------------------|--|---|
| No. | | Coating/ Cladding Concentricity | Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D IEC 60793-1-21, IEC 60793-2-50 Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 IEC 60793-1-20, IEC 60793-2-50 Section-I, Type-III, Single Mode Optical Fibre as per ITU-T G.656 IEC 60793-1-20, IEC 60793-2-50 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 (i) 250 µm fibre (ii) 200 µm fibre IEC 60793-1-20, IEC 60793-2-50 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 (i) 250 µm fibre (ii) 200 µm fibre IEC 60793-1-20, IEC 60793-2-50 Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-20, IEC 60793-2-50 Section-I, Type-I, Single Mode | TEC GR No. TEC89010:2021 |
| | | Diameter | Optical Fibre as per ITU-T G.652.D IEC 60793-1-21, IEC 60793-2-50 Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 IEC 60793-1-21, IEC 60793-2-50 | TEC 89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 16 of 104

| Sl. | Telecom | Test Parameter | or Type of Testing | Standard/ |
|-----|---|---------------------|--|-------------------------------------|
| No. | Equipment/ Product | | | Specification |
| | Trouuct | | | |
| | Raw material for Manufacturin g of Optical | Coating Diameter | Section-I, Type-III, Single Mode Optical Fibre as per ITU-T G.656 IEC 60793-1-21, IEC 60793-2-50 Section-I, Type-IV, Single Mode | TEC GR No. TEC89010:2021 TEC GR No. |
| | Fibre Cable | | Optical Fibre as per ITU-T G.657.A1 (i) 250 µm fibre (ii) 200 µm fibre IEC 60793-1-21, IEC 60793-2-50 | TEC89010:2021 |
| | | | Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 (i) 250 µm fibre (ii) 200 µm fibre IEC 60793-1-21, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-21, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 17 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|--|---|--|-----------------------------|
| | Raw material for Manufacturin g of Optical Fibre Cable | Fibre Attenuation before Cabling | Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D (i) at 1310 nm (ii between 1285-1380 nm (iii) between 1390-1525 nm (iv) at 1550 nm (v) between 1525-1625 nm (vi) at 1270 nm (vii) at 1490 nm (viii) at 1625 nm (ix) water peak attenuation at 1380 to 1390 nm IEC 60793-1-40 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 (i) between 1525 - 1565 nm (ii between 1565 - 1625 nm (iii) at 1550 nm (iv) at 1625 nm IEC 60793-1-40 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-III, Single Mode Optical Fibre as per ITU-T G.656 (i) between 1460-1525 nm (ii) between 1525-1565 nm (iii) between 1565-1625 nm (iv) at 1550 nm (v) at 1625 nm IEC 60793-1-40 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 18 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|--|---|--|--------------------------------------|
| | Raw material for Manufacturin g of Optical Fibre Cable | Fibre Attenuation before Cabling | (i) at 1270 nm (ii) at 1310 nm (iii) between 1285 -1360 nm (iv) between 1360 -1480 nm (v) at 1490 nm (vi) between 1480 to 1525 nm (vii) at 1550 nm (viii) between 1525 to 1625 nm (ix) at 1625 nm IEC 60793-1-40 Section-I, Type-IV, Single Mode | TEC GR No. TEC GR No. TEC 89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 19 of 104

| tion |
|--------------------------------|
| No. D:2021 No. D:2021 |
| |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 20 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|-----------------------------------|---|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Attenuation after Cabling Fibre | (i) at 1310 nm (ii) at 1383 nm (iii) at 1490 nm (iv) at 1550 nm (v) at 1625 nm IEC 60793-1-40 Section-I, Type-IV, Single Mode | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 21 of 104

| Sl. No. | Telecom Equipment/ | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|---|---------------------------------------|--|-----------------------------|
| 110. | Product | | | Specification |
| | Raw material for Manufacturin g of Optical | Attenuation after Cabling Fibre | Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 (i) at 1310 nm (ii) at 1383 nm | TEC GR No. TEC89010:2021 |
| | Fibre Cable | | (iii) at 1490 nm (iv) at 1550 nm (v) at 1625 nm IEC 60793-1-40 | |
| | | Cable Cut off Wavelength | Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D IEC 60793-1-44, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 IEC 60793-1-44, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-III, Single Mode Optical Fibre as per ITU-T G.656 IEC 60793-1-44, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 IEC 60793-1-44, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 IEC 60793-1-44, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-44, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 22 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|--|---|---|---|
| | Raw material for Manufacturin g of Optical Fibre Cable | Fibre Cutoff Wavelength for Fibre used in Patch cords & | Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 IEC 60793-1-44 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Pig-tails | IEC 60793-1-44 Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-44 | TEC GR No. TEC89010:2021 |
| | | Fibre Curl | Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D IEC 60793-1-34, IEC 60793-2-50 Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 IEC 60793-1-34, IEC 60793-2-50 Section-I, Type-III, Single Mode Optical Fibre as per ITU-T G.656 IEC 60793-1-34, IEC 60793-2-50 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | | Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 IEC 60793-1-34, IEC 60793-2-50 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 IEC 60793-1-34, IEC 60793-2-50 Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-34, IEC 60793-2-50 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 23 of 104

| Sl. | Telecom | Test Parameter | or Type of Testing | Standard/ |
|-----|-------------------|-------------------------|------------------------------------|-----------------------------|
| No. | Equipment/ | | | Specification |
| | Product | | | |
| | Raw material | Fibre Macro | Castian I Tama I Cinala Mada | TEC GR No. |
| | for | | Section-I, Type-I, Single Mode | TEC GR No. TEC89010:2021 |
| | | bend loss | Optical Fibre as per ITU-T G.652.D | 1EC89010:2021 |
| | Manufacturin | (Change in | IEC 60793-1-47, IEC 60793-2-50 | TEC CD M |
| | g of Optical | Attenuation | Section-I, Type-II, Single Mode | TEC GR No. |
| | Fibre Cable | When fibre is | Optical Fibre as per ITU-T G.655 | TEC89010:2021 |
| | | coiled with | IEC 60793-1-47, IEC 60793-2-50 | |
| | | 100 turns on | Section-I, Type-III, Single Mode | TEC GR No. |
| | | 60 ±1.0 mm | Optical Fibre as per ITU-T G.656 | TEC89010:2021 |
| | | diameter | IEC 60793-1-47, IEC 60793-2-50 | |
| | | mandrel) | | |
| | | Fibre Macro | Section-I, Type-I, Single Mode | TEC GR No. |
| | | bend loss | Optical Fibre as per ITU-T G.652.D | TEC89010:2021 |
| | | (Change in | IEC 60793-1-47, IEC 60793-2-50 | |
| | | Attenuation | | TEG GD M |
| | | When fibre is | Section-I, Type-II, Single Mode | TEC GR No. |
| | | coiled with 1 | Optical Fibre as per ITU-T G.655 | TEC89010:2021 |
| | | turn around | IEC 60793-1-47, IEC 60793-2-50 | |
| | | $32 \pm 0.5 \text{ mm}$ | Section-I, Type-III, Single Mode | TEC GR No. |
| | | diameter | Optical Fibre as per ITU-T G.656 | TEC89010:2021 |
| | | mandrel) | IEC 60793-1-47, IEC 60793-2-50 | |
| | | Fibre Macro | Section-I, Type-I, Single Mode | TEC GR No. |
| | | bend loss | Optical Fibre as per ITU-T G.652.D | TEC89010:2021 |
| | | (Change in | IEC 60793-1-47, IEC 60793-2-50 | |
| | | Attenuation | | |
| | | When fibre is | | |
| | | coiled with | | |
| | | 100 turns on | | |
| | | $50 \pm 0.5 \text{ mm}$ | | |
| | | diameter | | |
| | | mandrel) | | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 24 of 104

| Sl. | Telecom | Test Parameter | or Type of Testing | Standard/ |
|-----|--------------|----------------|-------------------------------------|---------------|
| No. | Equipment/ | | | Specification |
| | Product | | | |
| | D4. 1.1 | Total Marian | C (' T T TV C' 1 M 1 | TEC OD N |
| | Raw material | Fibre Macro | Section-I, Type-IV, Single Mode | TEC GR No. |
| | for | bend loss | Optical Fibre as per ITU-T | TEC89010:2021 |
| | Manufacturin | (Change in | G.657.A1 | |
| | g of Optical | Attenuation | IEC 60793-1-47, IEC 60793-2-50 | |
| | Fibre Cable | When fibre is | Section-I, Type-IV, Single Mode | TEC GR No. |
| | | coiled with 10 | Optical Fibre as per ITU-T | TEC89010:2021 |
| | | turns on 15 | G.657.A2 | |
| | | mm radius | IEC 60793-1-47, IEC 60793-2-50 | |
| | | mandrel) | | |
| | | Fibre Macro | Section-I, Type-IV, Single Mode | TEC GR No. |
| | | bend loss | Optical Fibre as per ITU-T G.657.A1 | TEC89010:2021 |
| | | (Change in | IEC 60793-1-47, IEC 60793-2-50 | |
| | | Attenuation | Section-I, Type-IV, Single Mode | TEC GR No. |
| | | When fibre is | Optical Fibre as per ITU-T G.657.A2 | TEC89010:2021 |
| | | coiled with 1 | IEC 60793-1-47, IEC 60793-2-50 | |
| | | turn on 10 | Section-I, Type-V, Single Mode | TEC GR No. |
| | | mm radius | Optical Fibre as per ITU-T G.657.B3 | TEC89010:2021 |
| | | mandrel | IEC 60793-1-47, IEC 60793-2-50 | |
| | | Fibre Macro | Section-I, Type-IV, Single Mode | TEC GR No. |
| | | bend loss | Optical Fibre as per ITU-T G.657.A2 | TEC89010:2021 |
| | | (Change in | IEC 60793-1-47, IEC 60793-2-50 | |
| | | Attenuation | Section-I, Type-V, Single Mode | TEC GR No. |
| | | When fibre is | Optical Fibre as per ITU-T G.657.B3 | TEC89010:2021 |
| | | coiled with 1 | IEC 60793-1-47, IEC 60793-2-50 | |
| | | turn on | | |
| | | 7.5 mm radius | | |
| | | mandrel | | |
| | | | | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 25 of 104

| Sl. No. | Telecom Equipment/ | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|--|--|---|
| | Product | | | |
| | Raw material for Manufacturin g of Optical Fibre Cable | Fibre Macro bend loss (Change in Attenuation When fibre is coiled with 1 turn on 5 mm radius mandrel | Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-47, IEC 60793-2-50 | TEC GR No. TEC89010:2021 |
| | | Polarization Mode Dispersion for Uncabled Fiber | Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 IEC 60793-1-48, IEC 60793-2-50 Section-I, Type-III, Single Mode Optical Fibre as per ITU-T G.656 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | | IEC 60793-1-48, IEC 60793-2-50 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 IEC 60793-1-48, IEC 60793-2-50 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 IEC 60793-1-48, IEC 60793-2-50 Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-48, IEC 60793-2-50 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 26 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|---|---|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Polarization Mode Dispersion for Cabled Fiber | IEC 60793-1-48, IEC 60793-2-50 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 IEC 60793-1-48, IEC 60793-2-50 Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Zero Dispersion Slope | IEC 60793-1-48, IEC 60793-2-50 Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D IEC 60793-1-42 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 IEC 60793-1-42 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 IEC 60793-1-42 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 27 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|---|--|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Zero Dispersion Slope Zero Dispersion Wavelength range | Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-42 Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D IEC 60793-1-42 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A1 IEC 60793-1-42 Section-I, Type-IV, Single Mode Optical Fibre as per ITU-T G.657.A2 IEC 60793-1-42 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Peak Stripability Force to | Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 IEC 60793-1-42 Section-I, Type-I, Single Mode Optical Fibre as per ITU-T G.652.D IEC 60793-1-32, IEC 60793-2-50 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Remove Primary Coating of the fiber (Unaged, Water aged, Damp Heat | Section-I, Type-II, Single Mode Optical Fibre as per ITU-T G.655 IEC 60793-1-32, IEC 60793-2-50 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | aged) | | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 28 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|--|--|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Peak Stripability Force to Remove Primary Coating of the fiber (Unaged, Water aged, Damp Heat aged) Total Dispersion (Chromatic Dispersion) | (i) 250 μm fibre (ii) 200 μm fibre IEC 60793-1-32, IEC 60793-2-50 Section-I, Type-IV, Single Mode | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | | iii) at 1550 nm iv) at 1625 nm IEC 60793-1-42, IEC 60793-2-50 | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 29 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|---|---|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Total Dispersion (Chromatic Dispersion) | i) In 1285-1330 nm band ii) In 1270-1340 nm band iii) at 1550 nm iv) at 1625 nm IEC 60793-1-42, IEC 60793-2-50 Section-I, Type-V, Single Mode Optical Fibre as per ITU-T G.657.B3 i) In 1285-1330 nm band ii) In 1270-1340 nm band iii) at 1550 nm iv) at 1625 nm | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Section-II Central Strength Member Fibre reinforced Plastic rod (FRP) | Thermal Resistance Test as per TEC 89010:2021 Elongation at Break as per ASTM D3916 Heat Stress Test as per TEC 89010:2021 Minimum Bend Diameter as per TEC 89010:2021 Tensile Strength at break as per ASTM D3916 Water Absorption as per ASTM D 570 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 30 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|---|--|---|--|
| | Raw material for Manufacturin g of Optical Fibre Cable Section- III [Generic Requirement s of Sheath Material (Polyethylene HDPE (BLACK)] | Carbon Black content as per ASTM D1603 Environmental Stress Cracking Resistance (ESCR) as per ASTM D1693 Carbon black dispersion as per IS-7328 Oxidation Induction Time as per | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. | |
| | | | ASTM D3895 Density Test as per ASTM D792 Elongation at Break as per ASTM D638 | TEC 89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Melt Flow Rate (Melt Flow Index) as per ASTM D1238 Moisture (content) Test as per ASTM D817 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 | |
| | | | Tensile Strength Test as per ASTM D638 UV Resistance Test as per IEC 60794-1-22, ASTM 154 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 31 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|--|---|---|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Section- IV [Generic Requirements of Outer JACKET | Density Test as per ASTM D792 Melt Flow Rate (Melt Flow Index) as per ASTM D1238 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Material (Polyamide– | Elongation as per ASTM D638 | TEC GR No. TEC89010:2021 |
| | | [12)] | Tensile Strength Test as per ASTM D638 | TEC GR No. TEC89010:2021 |
| | | | Water Absorption as per ASTM D 570 | TEC GR No. TEC89010:2021 |
| | | | Hardness as per ASTM D 2240 | TEC GR No. TEC89010:2021 |
| | | | Nos & Colour identification of Fiber per unit/tube/cable as per Munsell TIA 598 | TEC GR No. TEC89010:2021 |
| | | Section- V [Generic | Density Test as per ASTM D792 | TEC GR No. TEC89010:2021 |
| | | Requirements of Outer JACKET | Melt Flow Rate (Melt Flow Index) as per ASTM D1238 | TEC GR No. TEC89010:2021 |
| | | Material Polyamide – | Elongation test as per ASTM D638 | TEC GR No. TEC89010:2021 |
| | | 11] | Tensile Strength Test as per ASTM D638 | TEC GR No. TEC89010:2021 |
| | | | Water Absorption as per ASTM D 570 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 32 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|--|---|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Section- V [Generic Requirements of Outer JACKET Material Polyamide – 11] | Hardness as per ASTM D 2240 Nos & Colour identification of Fiber per unit/tube/cable as per Munsell TIA 598 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Section- VI- 1 Generic Requirement s of Polypropylen e Material | Melt Flow Rate (Melt Flow Index) as per ASTM D1238 Elongation Test as per ASTM D638 Tensile Strength Test as per ASTM D638 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Section- VI- 2 Generic Requirements of Polybutylene Terephthalate (PBTP) Material | Melt Flow Rate (Melt Flow Index) as per ASTM D1238 Elongation Test as per ASTM D638 Tensile Strength Test as per ASTM D638 Water Absorption as per ASTM D 570 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 33 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|--|---|---|---|
| | Raw material for Manufacturin g of Optical Fibre Cable | Section- VII, Type- 1, Type- 2 [Generic Requirements of FILLING COMPOUND for LOOSE TUBE (For Temperature Range of - 30°C to + 80°C & For Temperature Range of - 40°C to + 80°C to + | Cone Penetration at 25°C as per ASTM D217 Cone Penetration at -30 °C as per ASTM D217 Density Test as per ASTM D1217 Drop point as per ASTM 566 Flash point as per ASTM D92 Filling Jelly Compatibility with Fiber coating, UV Ink & Tube Material as per ASTM D4568 | TEC GR No. TEC89010:2021 |
| | | Section- VIII, Type- 1, Type- 2 [Generic Requirements of Cable Flooding Compound (For Temperature Range of -30°C to | Cone Penetration at 25°C as per ASTM D217 Cone Penetration at -30 °C as per ASTM D217 Density test as per ASTM D1217 Drop point as per ASTM 566 Flash point as per ASTM D92 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 34 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|---|--|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | +80°C & For Temperature Range of -40°C to + 80°C] Section- IX, | Filling Jelly Compatibility with Fiber coating, UV Ink & Tube Material as per ASTM D4568 Tensile (breaking load) & Belt | TEC GR No. TEC89010:2021 TEC GR No. |
| | | Type-1, Type-2 [Generic Requirements of Binder Tape and NYLON/ POLYESTER Binder Thread (PP & Nylon/ Polyester)] | Strength as per ASTM D882 Elongation Test as per ASTM D882 | TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Section- X [Generic Requirement s of Polyester Foil/Tape (Natural)] | Tensile (breaking load) & Belt Strength as per ASTM D882 Elongation test as per ASTM D882 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 35 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|--|---|--|---|
| | Raw material for Manufacturin g of Optical Fibre Cable | Section- XI [Generic Requirements of Impregnated Semi Rigid Fibre Reinforced Plastic ROD] | Elongation as per ASTM D3916 Minimum Bend Diameter as per TEC GR No. TEC89010:2021 Tensile Strength Test as per ASTM D3916 Water Absorption as per ASTM D 570 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Section- XII [Generic Requirement s of Impregnated Glass Fibre Reinforced] | Water Absorption as per ASTM D 570 | TEC GR No. TEC89010:2021 |
| | | Section- XIV [Generic Requirement s of Water BLOCKING Tape] | Swelling Speed as per As per TEC GR No. 89010:2021 Swelling Height as per As per TEC GR No. 89010:2021 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Section- XVI [Generic Requirement s of Aramid Reinforced PLASTIC (ARP) ROD] | Elongation at Break as per ASTM D3916 Heat Stress Test as per TEC GR No. 89010:2021 Minimum Bend Diameter as per TEC GR No. 89010:2021 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 36 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|--|---|---|---|
| | Raw material for Manufacturin g of Optical Fibre Cable | Section- XVI [Generic Requirement s of Aramid Reinforced PLASTIC (ARP) ROD] | Tensile Strength at break as per ASTM D3916 | TEC GR No. TEC89010:2021 |
| | | Section- XVIII [Generic | Gram per Denier (GPD) ASTM D2256/ D2256M Breaking Load as per | TEC GR No. TEC89010:2021 TEC GR No. |
| | | Requirement s of | ASTM D2256/ D2256M\ Elongation at Break as per | TEC GR No. TEC 89010:2021 TEC GR No. |
| | | POLYESTE R RIP CORD | ASTM D2256/ D2256M | TEC89010:2021 |
| | | Section- XIX | Breaking Load as per ASTM D2256/ D2256M | TEC GR No. TEC89010:2021 |
| | | [Generic Requiremen ts of Water Swellable (WS) YARN] | Elongation at Break as per ASTM D2256/ D2256M | TEC GR No. TEC89010:2021 |
| | | | Swelling Capacity as per TEC GR No. 89010:2021 | TEC GR No. TEC89010:2021 |
| | | | Swelling Speed as per TEC GR No. 89010:2021 | TEC GR No. TEC89010:2021 |
| | | | | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 37 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|--|---|--|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Section- XX [Generic Requirement s of LSZH Material | Environmental Stress Cracking Resistance (ESCR) as per ASTM D1693 Elongation at Break as per ASTM D638 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | (for Sheathing] | Tensile Strength as per ASTM D638 | TEC GR No. TEC89010:2021 |
| | | | Hardness as per ASTM D2240 | TEC GR No. TEC89010:2021 |
| | | Section- XXI (Generic | Carbon black content as per ASTM D1603 | TEC GR No. TEC89010:2021 |
| | | Requirements of Anti Tracking | Environmental Stress Cracking Resistance (ESCR) as per ASTM D1693 | TEC GR No. TEC89010:2021 |
| | Polyethylene for ADSS | | Carbon black dispersion as per IS-7328 | TEC GR No. TEC89010:2021 |
| | | FIBRE CABLE) | Oxidation Induction Time as per ASTM D3895 | TEC GR No. TEC89010:2021 |
| | | , | Density Test as per ASTM D792 | TEC GR No. TEC89010:2021 |
| | | | Elongation as per ASTM D638 | TEC GR No. TEC89010:2021 |
| | | | Moisture (Content) Test as per ASTM D1238 | TEC GR No. TEC89010:2021 |
| | | | Tensile Strength as per ASTM D638 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 38 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|--|--|---|--|
| | Raw material for Manufacturin g of Optical Fibre Cable | Section- XXI (Generic Requirements of Anti Tracking Polyethylene for ADSS OPTICAL FIBRE CABLE) | UV Resistance Test as per IEC 60794-1-22, ASTM G-154 Tracking & Erosion Test (For Track Resistance) as per IEC60794-4-20, ASTM D 2303 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | Section- XXII [Generic Requirement | Cone Penetration at 25°C as per ASTM D217 Cone Penetration at -30 °C as per ASTM D217 | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | s of Specification for FILLING JELLY for | Density as per ASTM D1217 Drop point as per | TEC GR No. TEC89010:2021 TEC GR No. |
| | | OPGW CABLE] | ASTM 566 Flash point as per ASTM D92 Oil separation as per | TEC89010:2021 TEC GR No. TEC89010:2021 TEC GR No. |
| | | | FTM 791-321 Volatility loss as per FTM 791-321 | TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | | Filling Jelly Compatibility with Fiber coating, UV Ink & Tube Material as per ASTM D4568 | TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 39 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|---|---|---|--|
| | for Manufacturin g of Optical Fibre Cable Requirement s of Polyamide 12 / Polyamide 11 for TIGHT BUFFER] Melt Flow I ASTM D12 Flongation ASTM D63 Tensile Stre ASTM D79 Melting Poi ASTM D79 Melting Poi ASTM D34 Water Abso ASTM D57 Hardness as | Density Test as per ASTM D792 Melt Flow Rate as per ASTM D1238 Elongation as per ASTM D638 Tensile Strength as per ASTM D792 Melting Point as per ASTM D3418 | TEC GR No. TEC89010:2021 | |
| | | Water Absorption as per ASTM D570 Hardness as per ASTM D2240 Section- XXVIII [Generic Requirements of Polyamide 10, for OUTER JACKET Material] Water Absorption as per ASTM D792 Melt Flow Rate as per ASTM D1238 Elongation as per ASTM D638 Tensile Strength as per ASTM D638 Water Absorption as per ASTM D570 Hardness as per ASTM D2240 | ASTM D570 Hardness as per | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 | |
| | | | ASTM D638 Tensile Strength as per | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |
| | | | ASTM D570 Hardness as per | TEC GR No. TEC89010:2021 TEC GR No. TEC89010:2021 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 40 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|--|---|---|---|
| | Raw material for Manufacturin g of Optical Fibre Cable | Section- XXVIII [Generic Requirements of Polyamide 10, for OUTER JACKET Material] | Colour (Nos & Colour identification of Fiber per unit/tube/cable as per Munsell TIA 598 | TEC GR No. TEC89010:2021 |
| | | Section- XXIX [Generic Requirements of Thermoplastic Polyurethane (TPU) for OUTER JACKET Material] | Density Test as per ASTM D792 Melt Flow Rate as per ASTM D1238 Water Absorption as per ASTM D570 Hardness as per ASTM D2240 Colour (Nos & Colour identification | TEC GR No. TEC89010:2021 TEC GR No. |
| 3 | Optical Fibre Cable | Variant-1: Hybrid Cable - Optical and Metallic | of Fiber per unit/tube/cable as per Munsell TIA 598 Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre | TEC 89010:2021 TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 41 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|----------------------------|--|----------------------------|
| | Optical Fibre Cable | Variant-1: Hybrid Cable | Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 |
| | | - Optical and Metallic | Tensile Strength as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 42 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|-------------------------------------|--|------------------------------------|
| | Optical Fibre | Variant-1: | UV Radiation Test as per | TEC ER No. |
| | Cable | Hybrid Cable - Optical and Metallic | IEC 60794-1-22 Check of the effect of aggression media on the cable as per ISO 175 | TEC70022401 TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Electrical Continuity Test as per IEC 60794-1-24, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Kink Resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Water tightness /Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Strippability Test -Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |
| | | | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 43 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|---|--|----------------------------|
| | Optical Fibre Cable | Variant-1: Hybrid Cable - Optical and | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | Metallic | Ribbon Micro-bend Test as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Core Clad concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Coating/Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 44 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|--|--|----------------------------|
| | Optical Fibre Cable | Variant-1: Hybrid Cable | Zero Dispersion Slope as per IEC 60793-1-42 | TEC ER No. TEC70022401 |
| | - Optical and Metallic | Zero Dispersion wavelength range as per IEC 60793-1-42 | TEC ER No. TEC70022401 | |
| | | | Fibre Macro bend loss as per ITU-T G.65x, ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fiber is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fiber is coiled with1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fiber is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 45 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---|---|--|
| | Optical Fibre Cable | Variant-1: Hybrid Cable - Optical and Metallic | (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 | TEC ER No. TEC70022401 |
| | | | Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 Flame Spread-Single cable as per IEC/EN 60332-1-2 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | Variant-2: Optical Fibre Cable - ADSS on Aerial Alignment | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm | TEC ER No. TEC70022401 |
| | | | PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | Tensile Strength Test as per IEC 60793-1-21 Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 46 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|-----------------------------|--|---------------------------|
| | Optical Fibre Cable | Variant-2: Optical Fibre | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | Cable - ADSS on Aerial | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | Alignment | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Aeolian Vibration Test as per IEEE 1222 | TEC ER No. TEC70022401 |
| | | | Galloping Test as per IEEE 1222 | TEC ER No. TEC70022401 |
| | | | Creep Test as per IEC 60794-4-20 | TEC ER No. TEC70022401 |
| | | | Snatch Test as per IEC 60794-1-2-E9 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 47 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|---|--|---|
| | Optical Fibre Cable | Variant-2: Optical Fibre Cable - ADSS on Aerial Alignment | Water Blocking Test as per IEC 60794-1-22 UV Radiation Test as per IEC 60794-1-22 Check of the effect of aggression | TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | media on the cable as per ISO 175 Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 Kink resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Water tightness /Water Blocking test as per IEC 60794-1-22 Strippability Test -Tight Buffer as per | TEC ER No. TEC70022401 TEC ER No. |
| | | | IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 Ribbon Dimension as per | TEC ER No. TEC ER No. |
| | | | IEC 60794-1-23, IEC 60794-3 Separability of individual fibres from ribbon as per | TEC 70022401 TEC ER No. TEC70022401 |
| | | | IEC 60794-1-23, IEC 60794-3 Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 48 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---|--|----------------------------|
| | Optical Fibre Cable | Variant-2: Optical Fibre Cable - ADSS | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | on Aerial Alignment | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Core Clad concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Coating/Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band | TEC ER No. TEC70022401 |
| | | | (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 49 of 104

| No. Equipment/ Spec Product Spec Product Pro | ecification |
|--|--|
| Cable Optical Fibre per TEC Cable - ADSS on Aerial Fibre Macro bend loss as per ITU-T TEC | C ER No. C70022401 C ER No. C70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 50 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---|---|--|
| | Optical Fibre Cable | Variant-2: Optical Fibre Cable - ADSS on Aerial Alignment | Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | Variant-3: Optical Fibre Cable- ADSS over Power line | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm | TEC ER No. TEC70022401 |
| | | | PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre | TEC ER No. TEC70022401 |
| | | | Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 |
| | | | Tensile Strength Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 51 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|-----------------------------------|---|----------------------------|
| | Optical Fibre Cable | Variant-3: Optical Fibre | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | Cable- ADSS over Power line | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Aeolian Vibration Test as per IEEE 1222 | TEC ER No. TEC70022401 |
| | | | Galloping Test as per IEEE 1222 | TEC ER No. TEC70022401 |
| | | | Creep Test as per IEC 60794-4-20 | TEC ER No. TEC70022401 |
| | | | Snatch Test as per IEC 60794-1-2-E9 | TEC ER No. TEC70022401 |
| | | | Electrical Test/ Tracking & Erosion Test as per IEC60794-4-20 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | UV Radiation Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 52 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|--|--|----------------------------|
| | Optical Fibre Cable | Variant-3: Optical Fibre Cable- ADSS | Check of the effect of aggression media on the cable ISO 175 | TEC ER No. TEC70022401 |
| | | over Power line | Cable Material Compatibility Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Kink resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Water tightness / Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Strippability Test - Tight Buffer Test as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |
| | | | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 53 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|--|---|--|
| | Optical Fibre Cable | Variant-3: Optical Fibre Cable- ADSS over Power line | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 Mode Field Diameter at 1310 nm/ 1550nm as per IEC60793-1-45 Cladding Diameter as per IEC 60793-1-20 Cladding Non-Circularity as per IEC 60793-1-20 Core Clad concentricity error as per IEC 60793-1-20 Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 Coating/Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 Zero Dispersion wavelength range as per IEC 60793-1-42 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 54 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|--|--|
| | Optical Fibre Cable | Variant-3: Optical Fibre Cable- ADSS over Power line | Fibre Macro bend loss as per ITU-T G.65x, ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fiber is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fiber is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fiber is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC 60793-1-32 Fiber Curl as per IEC 60793-1-34 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 55 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|--|----------------------------|
| | Optical Fibre Cable | Variant-4: Optical Fibre Cable- Direct Buried | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm | TEC ER No. TEC70022401 |
| | | | PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre | TEC ER No. TEC70022401 |
| | | | Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 |
| | | | Tensile Strength Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 56 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|-----------------------------|--|----------------------------|
| | Optical Fibre Cable | Variant-4: Optical Fibre | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | Cable- Direct Buried | Temperature Cycling as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | UV Radiation Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Check of the effect of aggression media on the cable as per ISO 175 | TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Electrical Continuity Test as per IEC 60794-1-24, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Kink Resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/ Compound Flow Test as per IEC 60794-1-21, IEC 60794-3, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Water tightness /Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 57 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|--|---|----------------------------|
| | Optical Fibre Cable | Variant-4: Optical Fibre Cable- Direct Buried | Strippability Test -Tight Buffer Test as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |
| | | | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/ 1550 nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Core Clad concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 58 of 104

| Sl. No. | Telecom Equipment/ Product | V 1 | | Standard/ Specification |
|------------|----------------------------------|--|---|----------------------------|
| | | Variant-4: Optical Fibre Cable- Direct Buried | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 Coating/Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 Zero Dispersion wavelength range as per IEC 60793-1-42 Fibre Macro bend loss as per ITU-T G.65x, ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fiber is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fiber is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fiber is coiled with 100 turns on 50 ±0.5 mm diameter mandrel | TEC ER No. TEC70022401 |
| | | | | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 59 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---|---|--|
| | Optical Fibre Cable | Variant-4: Optical Fibre Cable- Direct Buried | (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5mm radius mandrel. Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | Variant-5: Optical Fibre Cable- DSA | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 60 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|--|--|---|---------------------------|
| | Optical Fibre Variant-5: Cable Optical Fibre | Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 | |
| | | Cable- DSA | Tensile Strength Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 | |
| | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 | |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 | |
| | | Temperature Cycling Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 | |
| | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 | |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 61 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|-----------------------------|---|---------------------------|
| | Optical Fibre Cable | Variant-5: Optical Fibre | UV Radiation Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | Cable- DSA | Check of the effect of aggression media on the cable as per ISO 175 | TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Electrical Continuity Test as per IEC 60794-1-24, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Kink resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Water tightness / Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Strippability Test - Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |
| | | | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 62 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|-----------------------------|--|---------------------------|
| | Optical Fibre Cable | Variant-5: Optical Fibre | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | Cable- DSA | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Core Clad Concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Coating/Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm | TEC ER No. TEC70022401 |
| | | | (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 63 of 104

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 64 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|---|----------------------------|
| | Optical Fibre Cable | Variant-5: Optical Fibre Cable- DSA | (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel | |
| | | | (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. | |
| | | | Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 | TEC ER No. TEC70022401 |
| | | | Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 | TEC ER No. TEC70022401 |
| | | Variant-6: Optical Fibre Cable- Duct | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm | TEC ER No. TEC70022401 |
| | | | PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre | TEC ER No. TEC70022401 |
| | | | Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 |
| | | | Tensile Strength Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 65 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|-----------------------------------|---|----------------------------|
| | Optical Fibre Cable | Variant-6: Optical Fibre | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | Cable- Duct | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | UV Radiation Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Check of the effect of aggression media on the cable as per ISO 175 | TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 66 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|-----------------------------------|--|----------------------------|
| | Optical Fibre Cable | Variant-6: Optical Fibre | Electrical Continuity Test as per IEC 60794-1-24, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | Cable- Duct | Kink resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Water tightness / Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Strippability Test -tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |
| | | | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 67 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|--|--|--|
| | | Variant-6: Optical Fibre Cable- Duct | Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 Cladding Diameter as per IEC 60793-1-20 Cladding Non-Circularity as per IEC 60793-1-20 Core Clad Concentricity error as per IEC 60793-1-20 Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 Coating /Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 Zero Dispersion wavelength range as per | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | IEC 60793-1-42 | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 68 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|---|----------------------------|
| | Optical Fibre Cable | Variant-6: Optical Fibre Cable- Duct | Fibre Macro bend loss as per ITU-T G.65x ,ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 69 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|---|--|
| | Optical Fibre Cable | Variant-6: Optical Fibre Cable- Duct | (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel Peak Stripability force to remove Primary coating of the fiber | TEC ER No. TEC70022401 |
| | | | (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 | TEC ER No. TEC70022401 |
| | | Variant-7: Optical Fibre Cable- In Home | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm | TEC ER No. TEC70022401 |
| | | | PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | Tensile Strength as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 70 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|-----------------------------|---|---------------------------|
| | Optical Fibre Cable | Variant-7: Optical Fibre | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | Cable- In Home | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Check of the effect of aggression media on the cable as per ISO 175 | TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Core Clad Concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 71 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|--|--|--|
| | Optical Fibre Cable | Variant-7: Optical Fibre Cable- In Home | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 Coating /Cladding Concentricity as per | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | IEC 60793-1-21, IEC 60793-2-50 Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm | TEC ER No. TEC70022401 |
| | | | (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 | TEC ER No. TEC70022401 |
| | | | Zero Dispersion wavelength range as per IEC 60793-1-42 | TEC ER No. TEC70022401 |
| | | | Fibre Macro bend loss as per ITU-T G.65x ,ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: | TEC ER No. TEC70022401 |
| | | | (i) Change in attenuation when fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 | |
| | | | mm diameter mandrel (iii) Change in attenuation when fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 72 of 104

| Sl. No. | Telecom Equipment/ | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|------------------------|--|--|--|
| | Product | | | |
| | Optical Fibre Cable | Variant-7: Optical Fibre Cable- In Home | (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. | |
| | | | Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | Flame Spread-Single cable as per IEC/EN 60332-1-2 | TEC ER No. TEC70022401 |
| | | Variant-8: Optical Fibre Cable- Indoor | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 73 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|---------------------------------------|--|----------------------------|
| | Optical Fibre Cable | Variant-8: Optical Fibre Cable- | PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre | TEC ER No. TEC70022401 |
| | | Indoor | Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 |
| | | | Tensile Strength as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 74 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|---|---|---|--|
| | Optical Fibre Cable Optical Fibre Cable Optical Fibre | Variant-8: Optical Fibre Cable- Indoor | Water Blocking Test as per IEC 60794-1-22 Check of the effect of aggression media on the cable as per | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | Cable Optical Fibre Cable Optical Fibre | | ISO 175 Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 Kink resistance Test as per | TEC ER No. TEC70022401 TEC ER No. |
| | Cable | | IEC 60794-1-23 Drainage Test/Compound Flow test as per IEC 60794-1-21, IEC 60794-3 | TEC70022401 TEC ER No. TEC70022401 |
| | | | Water tightness / Water Blocking test IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Strippability Test -Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |
| | | | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | Optical Fibre | | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 75 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---|---|---|
| | | Variant-8: Optical Fibre Cable- Indoor | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 Cladding Diameter Test IEC 60793-1-20 Cladding Non-Circularity Test IEC 60793-1-20 Core Clad Concentricity error as per IEC 60793-1-20 Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 Coating /Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 | TEC ER No. TEC70022401 |
| | | | | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 76 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|---|---|--|
| | Cable Optical Fibre | Variant-8: Optical Fibre Cable- Indoor | Zero Dispersion wavelength range as per IEC 60793-1-42 Fibre Macro bend loss as per ITU-T G.65x ,ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 77 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|---|--|---|
| | Cable Optical Fibre | Variant-8: Optical Fibre Cable- Indoor | Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 | TEC ER No. TEC70022401 |
| | | | Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 Flame Spread-Single cable as per | TEC ER No. TEC70022401 TEC ER No. |
| | | | IEC/EN 60332-1-2 | TEC70022401 |
| | | Variant-9: Optical Fibre Cable- Indoor/ Outdoor | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm PMD as per IEC 60793-1-48 | TEC ER No. TEC70022401 TEC ER No. |
| | | | (a) Cabled Loose Fibre(b) Cabled Ribbon Fibre | TEC70022401 |
| | | | Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 |
| | | | Tensile Strength as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 78 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|-----------------------------|---|---------------------------|
| | Cable Optical Fibre | Variant-9: Optical Fibre | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | Indoor/ Outdoor | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | UV Radiation Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Check of the effect of aggression media on the cable as per ISO 175 | TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Kink resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 79 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---------------------------------------|---|----------------------------|
| | Cable Optical Fibre | Variant-9: Optical Fibre Cable- | Water tightness / Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | Indoor/ Outdoor | Strippability Test - Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |
| | | | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 80 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|---|---|---|
| | Cable Optical Fibre | Variant-9: Optical Fibre Cable- Indoor/ Outdoor | Core Clad Concentricity error as per IEC 60793-1-20 Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 Coating /Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 Zero Dispersion wavelength range as per IEC 60793-1-42 Fibre Macro bend loss as per ITU-T G.65x ,ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel | TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 81 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---|--|--|
| | Optical Fibre Cable | Variant-9: Optical Fibre Cable- Indoor/ Outdoor | (iii) Change in attenuation when fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 Flame Spread-Single cable as per IEC/EN 60332-1-2 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 82 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|--|--|---|
| | | | | |
| | Optical Fibre Cable | Variant-10: Optical Fibre Cable- Lashed Aerial | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm | TEC ER No. TEC70022401 |
| | | | (v) at 1625nm PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre Cable Cut-off wavelength as per | TEC ER No. TEC70022401 TEC ER No. |
| | | | IEC 60793-1-44 | TEC70022401 |
| | | | Tensile Strength as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 83 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|------------------------------|---|---------------------------|
| | Optical Fibre Cable | Variant-10: Optical Fibre | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | Cable- Lashed Aerial | Temperature Cycling Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | Aeriai | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | UV Radiation Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Check of the effect of aggression media on the cable as per ISO 175 | TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Kink resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Water tightness / Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Strippability Test - Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 84 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|-----------------------------------|--|----------------------------|
| | Optical Fibre Cable | Variant-10: Optical Fibre | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | Cable- Lashed Aerial | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Core Clad Concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Coating /Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 85 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|---|--|
| | Optical Fibre Cable | Variant-10: Optical Fibre Cable- Lashed Aerial | Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 Zero Dispersion wavelength range as per IEC 60793-1-42 Fibre Macro bend loss as per ITU-T G.65x, ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel | TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 86 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|--|--|--|
| | Optical Fibre Cable | Variant-10: Optical Fibre Cable- Lashed Aerial | (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. | |
| | | | Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 | TEC ER No. TEC70022401 |
| | | | Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 | TEC ER No. TEC70022401 |
| | | Variant-11: Optical Fibre Cable- Micro-Duct | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | (b) Cabled Ribbon Fibre Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 87 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|-----------------------------------|--|----------------------------|
| | Optical Fibre Cable | Variant-11: Optical Fibre | Tensile Strength as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | Cable- Micro-Duct | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | UV Radiation Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 88 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|---|--|---|--|
| | Optical Fibre Cable | Variant-11: Optical Fibre Cable- Micro-Duct | Check of the effect of aggression media on the cable as per ISO 175 Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 Kink resistance Test as per IEC 60794-1-23 Drainage Test/Compound Flow as per IEC 60794-1-21, IEC 60794-3 Water tightness / Water Blocking test as per IEC 60794-1-22 Strippability Test - Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | ŕ | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 89 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|------------------------------|--|----------------------------|
| | Optical Fibre Cable | Variant-11: Optical Fibre | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | Cable- Micro-Duct | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Core Clad Concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Coating /Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm | TEC ER No. TEC70022401 |
| | | | (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band | |
| | | | Zero Dispersion slope as per IEC 60793-1-42 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 90 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|--|--|
| | Optical Fibre Cable | Variant-11: Optical Fibre Cable- Micro-Duct | Zero Dispersion wavelength range as per IEC 60793-1-42 Fibre Macro bend loss as per ITU-T G.65x, ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 91 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|---|--|
| | Optical Fibre Cable | Variant-11: Optical Fibre Cable- Micro-Duct | Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 Fiber Curl as per | TEC ER No. TEC ER No. |
| | | Variant-12: Optical Fibre Cable- Outdoor | IEC 60793-2-50, IEC 60793-1-34 Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm | TEC70022401 TEC ER No. TEC70022401 |
| | | | PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre Cable Cut-off wavelength as per | TEC ER No. TEC FR No. |
| | | | IEC 60793-1-44 Tensile Strength as per IEC 60793-1-21 Crush Resistance as per | TEC70022401 TEC ER No. TEC70022401 TEC ER No. |
| | | | IEC 60793-1-21 Impact Test as per IEC 60793-1-21 | TEC70022401 TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC C 60794-1-21 Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 92 of 104

| Sl. No. | Telecom Equipment/ Product | | | Standard/ Specification |
|------------|----------------------------------|--|---|---|
| | Optical Fibre Cable | Variant-12: Optical Fibre Cable- | Repeated Bend Test as per IEC 60794-1-21 Torsion Test as per | TEC ER No. TEC70022401 TEC ER No. |
| | Outdoor | IEC 60794-1-21 Cable drip Test as per IEC 60794-1-22 | TEC70022401 TEC ER No. TEC70022401 | |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | UV Radiation Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Check of the effect of aggression media on the cable as per ISO 175 | TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Kink resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 93 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|--|----------------------------|
| | Optical Fibre Cable | Variant-12: Optical Fibre Cable- | Water tightness / Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | Outdoor | Strippability Test -Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |
| | | | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 94 of 104

| Sl. No. | Telecom Equipment/ | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|------------------------|------------------------------|--|----------------------------|
| | Product | | | |
| | Optical Fibre Cable | Variant-12: Optical Fibre | Core Clad Concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | Cable- Outdoor | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Coating /Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band | TEC ER No. TEC70022401 |
| | | | Zero Dispersion slope as per IEC 60793-1-42 | TEC ER No. TEC70022401 |
| | | | Zero Dispersion wavelength range as per IEC 60793-1-42 | TEC ER No. TEC70022401 |
| | | | Fibre Macro bend loss as per ITU-T G.65x ,ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: | TEC ER No. TEC70022401 |
| | | | (i) Change in attenuation when fibre is coiled with 100 turns on 60 ± 1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 95 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---|--|--|
| | Optical Fibre Cable | Variant-12: Optical Fibre Cable- Outdoor | fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 | TEC ER No. TEC70022401 |
| | | Variant-13: Optical Fibre Cable- Riser | Fiber Curl as per IEC 60793-1-34 Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm (v) at 1625nm | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 96 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | or Type of Testing | Standard/ Specification |
|------------|----------------------------------|--|--|--|
| | Optical Fibre Cable | Variant-13: Optical Fibre Cable- Riser | PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre Cable Cut-off wavelength as per IEC 60793-1-44 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | Tensile Strength as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Crush Resistance as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Impact Test as per IEC 60793-1-21 | TEC ER No. TEC70022401 |
| | | | Kink Test as per IEC C 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Torsion Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Abrasion Resistance Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Aging test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 97 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|--|---|--|
| | Optical Fibre Cable | Variant-13: Optical Fibre Cable- Riser | Check of the effect of aggression media on the cable as per ISO 175 Cable Material Compatibility as per Telecordia GR 20, IEC 60794- 3-11 Kink resistance Test as per IEC 60794-1-23 Drainage Test/Compound Flow as per IEC 60794-1-21, IEC 60794-3 Water tightness / Water Blocking test as per IEC 60794-1-22 Strippability Test -Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32; IEC 60794-1-23, IEC 60794-3 Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 Ribbon Micro-bend as per IEC 60794-3 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | , | |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 98 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|--|--|--|
| | Optical Fibre Cable | Variant-13: Optical Fibre Cable- Riser | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 Cladding Non-Circularity as per | TEC ER No. TEC70022401 TEC ER No. |
| | | | IEC 60793-1-20 Core Clad Concentricity error IEC 60793-1-20 | TEC |
| | | | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Coating /Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band | TEC ER No. TEC70022401 |
| | | | Zero Dispersion slope as per IEC 60793-1-42 | TEC ER No. TEC70022401 |
| | | | Zero Dispersion wavelength range as per IEC 60793-1-42 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa- 396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 99 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|--|--|----------------------------|
| | Optical Fibre Cable | Variant-13: Optical Fibre Cable- Riser | Fibre Macro bend loss as per ITU-T G.65x ,ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: | TEC ER No. TEC70022401 |
| | | | (i) Change in attenuation when fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. Peak Stripability force to remove | TEC ER No. |
| | | | Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 | TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 100 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|--|--|--|
| | Optical Fibre Cable | Variant-13: Optical Fibre Cable- Riser | Fiber Curl as per IEC 60793-2-50, IEC 60793-1-34 Flame Spread-Single cable as per IEC/EN 60332-1-2 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |
| | | Variant-14: Optical Ground Wire -OPGW | Attenuation as per IEC-60793-1-40 (i) at 1310nm (ii) at 1383nm (iii) at 1490 nm (iv) at 1550nm | TEC ER No. TEC70022401 |
| | | | (v) at 1625nm PMD as per IEC 60793-1-48 (a) Cabled Loose Fibre (b) Cabled Ribbon Fibre Cable Cut-off wavelength as per | TEC ER No. TEC70022401 TEC ER No. |
| | | | IEC 60793-1-44 Tensile Strength as per IEC 60793-1-21 Crush Resistance as per | TEC70022401 TEC ER No. TEC70022401 TEC ER No. |
| | | | IEC 60793-1-21 Impact Test as per IEC 60793-1-21 | TEC ER No. TEC ER No. TEC70022401 |
| | | | Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Repeated Bend Test as per IEC 60794-1-21 | TEC ER No. TEC70022401 |
| | | | Cable drip Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 101 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|------------------------|--|---------------------------|
| | Optical Fibre Cable | Variant-14: Optical | Creep Test as per IEC 60794-4-20 | TEC ER No. TEC70022401 |
| | | Ground Wire -OPGW | Sheave Test as per IEEE 1138:2009 | TEC ER No. TEC70022401 |
| | | | Stress Strain Test as per IEEE 1138:2009 | TEC ER No. TEC70022401 |
| | | | Strain Margin Test as per IEEE 1138:2009 | TEC ER No. TEC70022401 |
| | | | Temperature Cycling Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Water Blocking Test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Cable Material Compatibility Telecordia GR 20, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Electrical Continuity Test as per IEC 60794-1-24, IEC 60794- 3-11 | TEC ER No. TEC70022401 |
| | | | Kink resistance Test as per IEC 60794-1-23 | TEC ER No. TEC70022401 |
| | | | Drainage Test/Compound Flow as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Water tightness / Water Blocking test as per IEC 60794-1-22 | TEC ER No. TEC70022401 |
| | | | Strippability Test -Tight Buffer as per IEC 60794-3, IEC 60793-1-32, IEC 60793-1-32:2010 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 102 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter | Standard/ Specification | |
|------------|----------------------------------|------------------------|--|---------------------------|
| | Optical Fibre Cable | Variant-14: Optical | Ribbon Dimension as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | Ground Wire -OPGW | Separability of individual fibres from ribbon as per IEC 60794-1-23, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Compression Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Torsion Resistance as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Micro-bend as per IEC 60794-1-31, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Ribbon Stripability Test as per IEC 60794-1-21, IEC 60794-3 | TEC ER No. TEC70022401 |
| | | | Mode Field Diameter at 1310 nm/1550 nm as per IEC60793-1-45 | TEC ER No. TEC70022401 |
| | | | Cladding Diameter as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Cladding Non-Circularity as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Core Clad Concentricity error as per IEC 60793-1-20 | TEC ER No. TEC70022401 |
| | | | Coating diameter as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |
| | | | Coating /Cladding Concentricity as per IEC 60793-1-21, IEC 60793-2-50 | TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 103 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---------------------------------------|---|--|
| | Optical Fibre Cable | Variant-14: Optical Ground Wire -OPGW | Chromatic Dispersion as per IEC 60793-1-42, IEC 60793-2-50 (i) at 1550 nm (ii) at 1625 nm (iii) In 1285-1330 nm band (iv) In 1270-1340 nm band Zero Dispersion slope as per IEC 60793-1-42 Zero Dispersion wavelength range as per IEC 60793-1-42 Fibre Macro bend loss as per ITU-T G.65x ,ITU-T G.650.1, IEC 60793-2-50 and IEC 60793-1-47: (i) Change in attenuation when fibre is coiled with 100 turns on 60 ±1.0 mm diameter mandrel (ii) Change in attenuation when fibre is coiled with 1 turn around 32 ± 0.5 mm diameter mandrel (iii) Change in attenuation when fibre is coiled with 100 turns on 50 ±0.5 mm diameter mandrel (iv) Change in attenuation when fibre is coiled with 10 turns on 15 mm radius mandrel | TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.

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)

Laboratory Name: M/s Sterlite Technologies Ltd. (OFC Quality Assurance Laboratory)

Survey No. 68/1, Madhuban Dham Road, Rakholi, Silvasa-396 230,

U. T. of Dadra and Nagar Haveli

Certificate Number: TEC/MRA/CAB/IND-D/83 Page 104 of 104

| Sl. No. | Telecom Equipment/ Product | Test Parameter or Type of Testing | | Standard/ Specification |
|------------|----------------------------------|---------------------------------------|--|--|
| | Optical Fibre Cable | Variant-14: Optical Ground Wire -OPGW | (v) Change in attenuation when fibre is coiled with 1 turn on 10 mm radius mandrel (vi) Change in attenuation when fibre is coiled with 1 turn on 7.5 mm radius mandrel (vii) Change in attenuation when fibre is coiled with 1 turn on 5 mm radius mandrel. Peak Stripability force to remove Primary coating of the fiber (Unaged, Water aged, Damp Heat aged) as per IEC 60793-2-50, IEC60793-1-32 Fiber Curl as per IEC 60793-1-34 | TEC ER No. TEC70022401 TEC ER No. TEC70022401 |

AD (CA), TEC

^{*}The validity of Certificate is up to 29/08/2028 or the continued validity of NABL Accreditation, whichever is earlier.