



BUREAU OF INDIAN STANDARDS

AGENDA

19th MEETING OF 'FIBRE OPTICS, FIBRES, CABLES AND DEVICES' SECTIONAL COMMITTEE, LITD 11 (Hybrid)

Date & Time	1 st October 2024, 02:00 PM
Meeting link	https://bismanak.webex.com/bismanak/j.php?MTID=m643ebacf685c9035677787c31168912e
Meeting ID	2514 932 2351
Password	11@19

Chairperson: Shri Rakesh Desai, Deputy Director General, TEC, DoT

Member Secretary: Shri Priyanshu Sharma, Scientist 'C' & Deputy Director, BIS

ITEM 0 WELCOME

- 0.1** Welcome by the Member Secretary
- 0.2** Opening remarks by the Chairperson

ITEM 1 FORMAL CONFIRMATION OF THE MINUTES OF THE LAST MEETING

- 1.1** The minutes of the 18th meeting of 'Fibre Optics, Fibres, Cables and Devices' Sectional Committee, LITD 11, which was held on 21 November 2023, were circulated vide BIS portal as well as vide email. No comments have been received.

THE COMMITTEE MAY FORMALLY CONFIRM THE MINUTES.

ITEM 2 SCOPE & COMPOSITION OF COMMITTEE

- 2.1** The Scope and composition of LITD 11 is given in [Annex 1](#).

THE COMMITTEE MAY REVIEW THE SCOPE & COMPOSITION

ITEM 3 PANEL FOR REVISION OF IS 17046: 2018 "Fibre Optic Cable for Cable TV Application"

- 3.1** During the 17th meeting of LITD 11. Committee formulated a Panel of experts for comparison of IS 17046: 2018 Fibre Optic Cable for Cable TV Application" with TEC GR 85200:2022, who will then give their recommendations to the Committee, whether the said Standard need to be revised/withdrawn.

- 3.2** First meeting of Panel for review of Indian Standards, LITD 11 was held on 12th Oct 2023, and the

approved minutes of this meeting were circulated to all members of Panel and LITD 11 on 06th Nov 2023 for information and comments. (Minutes of Panel enclosed as Annex-2). **The recommendations of PANEL were as follows.** Due to paucity of time in the 18th meeting of LITD 11, it was decided to discuss the minutes of the panel in this committee (19th) meeting:

Recommendations of Panel:-

3.2.1 IS 17046: 2018 “Fibre Optic Cable for Cable TV Application”

1. **IS 17046: 2018 “Fibre Optic Cable for Cable TV Application” need not be withdrawn and decided to revise the Standard** taking into latest technology and raw materials into consideration and wider stakeholders consultations including Cable TV industry members
2. All members of LITD 11 would give their comments on IS 17046: 2018 and based on their comments, a Working Draft will be prepared and circulated to all members for period of 15 days. It will be then discussed in next meeting of LITD 11 or Panel.

3.2.2 IS 16939: 2018 Optical Fibre Cables For Inside Premises FTTX Application

1. Members of Committee namely Shri Sandeep Aggarwal (Convener), Prof. N.K. Goyal and Shri Roshan Kumar was of the opinion that IS 16939: 2018 need to be retained and revised as per latest technology.
2. Smt Kamla Pargai, was of the opinion though IS 16939: 2018 Standard is similar to TEC GR No. 85160:2021, but it has fewer requirements or lenient requirements and hence creating confusion to industry, therefore it should be withdrawn.
3. Other members were of the opinion that though both IS 16939: 2018 and TEC GR No. 85160:2021 scope and requirements are different, as IS 16939: 2018 caters to base users. The issue may be discussed in the next meeting of Panel after taking comments from other members of Committees also.
4. It was decided that withdrawal of IS 16939: 2018 ‘Optical Fibre Cables For Inside Premises FTTX Application/ may be deferred till comments of other members of LITD 11 and from industry also received.

3.3 Proposal regarding referred standards in IS 17046: 2018 “Fibre Optic Cable for Cable TV Application”

It has been observed that IS 17046: 2018 refers to multiple standards of IEC 60794 series, which has undergone subdivisions starting in 2017. In view of the above, the committee may consider this aspect too while revising IS 17046:2018.

THE COMMITTEE MAY DISCUSS AND DECIDE

ITEM 4 REVIEW OF PUBLISHED/UNDER DEVELOPMENT STANDARDS

4.1 Review of Published Standards

In accordance with BIS procedures, Indian Standards which are in existence for more than 3 years are to be reviewed for reaffirmation/revision/withdrawal. The committee may also review the following standards since these are due in 2024-25, the latest status along with International standards on which these standards are based upon, is provided below:

SI No.	IS No.	Title	Review due on	Base Standard	Secretariat Remarks
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1.	IS 14624 (Pt 2): 2012	Safety of laser products: Pt 2 safety of optical fibre communication systems (OFCS) (First Revision)	December, 2024	IEC 60825-2:2005	The base standard has been revised by IEC 60825-2:2021/COR 1:2021, revision may be taken up
2.	IS 14976: 2012	Calibration of fibre - Optic power meters (First Revision)	December, 2024	IEC 61315: 2005	The base standard has been revised by IEC 61315:2019, revision may be taken up
3.	IS 15077 (Pt 2) : 2012	Semiconductor optoelectronic devices for fibre optic system applications: Pt 2 measuring methods (1st Revision)	September, 2024	IEC 62007-2: 2009	No change
4.	IS 16180 (Pt 13) : 2018	Fibre optic connector interfaces: Pt 13 type fc - Pc connector	November, 2024	IEC 61754-13: 2006	The base standard has been revised by IEC 61754-13:2024, revision may be taken up
5.	IS 16607 : 2018	Fibre Optics Launch Condition Requirements for Measuring Multimode Attenuation	October, 2024	IEC 62614 : 2010	No change
6.	IS 16625 (Pt 1) : 2018	Optical Circuit Boards Pt 1 General	November, 2024	IEC 62496-1 : 2008	No change
7.	IS 16939 : 2018	Optical Fibre Cables for Inside Premises (FTTX) Application	June, 2024	-	-
8.	IS 17046 : 2018	Fibre Optic Cable for Cable TV Application	October, 2024	-	-
9.	IS/IEC 60793-1-21 : 2001	Optical fibres: Pt 1 measurement methods and test procedures: Sec 21 coating geometry	December, 2024	IEC 60793-1-21 : 2001	No change

10.	IS/IEC 60793-1-22 : 2001	Optical fibres: Pt 1 measurement methods and test procedures: Sec 22 length measurement	December, 2024	IEC 60793- 1-22 : 2001	The base standard has been revised by IEC 60793-1-22:2024, revision may be taken up
11.	IS/IEC 60793-1-43 : 2015	Optical fibres: Pt 1 measurement methods and test procedures: Sec 43 numerical aperture measurement (First Revision)	January, 2025	IEC 60793- 1-43 : 2015	No change
12.	IS/IEC 60793-1-51 : 2014	Optical fibres: Pt 1 measurement methods and test procedures: Sec 51 dry heat (Steady State) tests (First Revision)	June, 2024	IEC 60793- 1-51 : 2014	No change
13.	IS/IEC 60793-1-52 : 2014	Optical fibres: Pt 1 measurement methods and test procedures: Sec 52 change of temperature tests (First Revision)	June, 2024	IEC 60793- 1-52 : 2014	No change
14.	IS/IEC 60793-1-53 : 2014	Optical fibres: Pt 1 measurement methods and test procedures: Sec 53 water immersion tests (First Revision)	August, 2024	IEC 60793- 1-53 : 2014	No change
15.	IS/IEC 60793-2-60 : 2008	Optical fibres: Pt 2 product specifications: Sec 60: Sectional specification for category c single - Mode intra connection fibres	May, 2024	IEC 60793- 2-60 : 2008	No change
16.	IS/IEC 60794-1-1 : 2015	Optical Fibre Cables Pt 1 Generic Specification Section 1 General (First Revision)	August, 2024	IEC 60794- 1-1 : 2015	The base standard has been revised by IEC 60794-1-1:2023, revision may be taken up
17.	IS/IEC 60794-2-10 : 2011	Optical Fibre Cables Pt 2 Indoor Optical Fibre Cables Section 10 Family specification for simplex and duplex cables	October, 2024	IEC 60794- 2-10 : 2011	The base standard has been revised by IEC 60794-2-10:2023, revision may be taken up
18.	IS/IEC 60794-3-10 : 2015	Optical Fibre Cables Pt 3 Outdoor cables Section 10 Family specification for duct directly buried or lashed aerial optical telecommunication cables	November 2024	IEC 60794- 3-10 : 2015	No change
19.	IS/IEC 60794-3-11 : 2010	Optical Fibre Cables Pt 3 Outdoor cables Section 11 Product specification for duct directly buried and lashed Aerial single-	November 2024	IEC 60794- 3-11 : 2010	No change

		mode optical fibre telecommunication cables			
20.	IS/IEC 60794-3-21 : 2015	Optical Fibre Cables Pt 3 Outdoor Cables Section 21 Product Specification For Optical Self-Supporting Aerial Telecommunication Cables For Use In Premises Cabling	July 2024	IEC 60794-3-21 : 2015	No change
21.	IS/IEC 60794-3-30 : 2018	Optical Fibre Cables Pt 3 Outdoor Cables Section 30 Family specification for optical telecommunication cables for lakes, river crossings and coastal applications	May, 2024	IEC 60794-3-30 : 2008	No change
22.	IS/IEC 60794-4-20 : 2018	Optical Fibre Cables Pt 4 Sectional specification Section 20 Aerial optical cables along electrical power lines Family specification for ADSS all dielectric self-supported optical cables	December 2024	IEC 60794-4-20 : 2018	No change
23.	IS/IEC 60874-1 : 2011	Fibre Optic Interconnecting Devices and Passive Components Connectors for Optical Fibres and Cables Pt 1 Generic Specification	August, 2024	IEC 60874-1 : 2011	The base standard has been withdrawn
24.	IS/IEC 60875-1 : 2015	Fibre optic interconnecting devices and passive components - Non - Wavelength - Selective fibre optic branching devices: Pt 1 generic specification	August, 2024	IEC 60875-1 : 2015	The base standard has been revised by IEC 60875-1:2024, revision may be taken up
25.	IS/IEC 60876-1 : 2014	Fibre optic interconnecting devices and passive components - Fibre optic spatial switches: Pt 1 generic specification (First Revision)	September, 2024	IEC 60876-1 : 2014	No change
26.	IS/IEC 61744 : 2005	Calibration Of Fibre Optic Chromatic Dispersion Test Sets	November 2024	IEC 61744 : 2005	The base standard has been revised by IEC 61744:2023, revision may be taken up
27.	IS/IEC 61746 : 2005	Calibration Of Optical Time-Domain Reflectometers(OTDR)	April, 2024	IEC 61746 : 2005	The base standard has been revised by IEC 61746-1:2009, revision may be taken up

28.	IS/IEC 61746-2 : 2010	Calibration of optical time-domain reflectometers (OTDR) - Pt 2: OTDR for multimode fibres	April, 2024	IEC 61746-2 : 2010	No change
29.	IS/IEC/TR 62283 : 2010	Optical Fibres Guidance for Nuclear Radiation Test	October, 2024	IEC/TR 62283 : 2010	No change
30.	IS/IEC 62538 : 2008	Categorization of Optical Devices	June, 2024	IEC 62538 : 2008	No change
31.	IS/IEC/TR 62572-2 : 2008	Fibre Optic Active Components and Devices - Reliability Standards Pt 2 Laser Module Degradation	June, 2024	IEC/TR 62572-2 : 2008	No change

4.2 Draft Indian Standards for Finalization.

4.2.1 The following draft Indian standards have completed WC-draft stage no comments have been received. During the last meeting it was decided to discuss the finalization of these Standards in this meeting of LITD 11. The committee may deliberate and decide:

Sl No.	Document No.	Title
1	LITD/11/23466 IEC 60825-2: 2021	Safety of laser products – Part 2 Safety of optical fibre communication systems (OFCSs) [<i>Superseding IS 14624(Part 2):2012</i>]
2	LITD/11/23467 IS / IEC 60793-1-1: 2023	Optical Fibres Part 1 Measurement Methods and Test Procedures Section 1 General and Guidance) <i>Second Revision</i>)
3	LITD 11 (23468) IS / IEC 60794-1-1: 2022	Optical Fibre Cables Part 1 Generic Specification Section 1 General) <i>Second Revision</i>)
4	LITD 11 (23469) IS / IEC 60794-1-2: 2021	Optical Fibre Cables Part 1 Generic Specification Section 2 Basic optical cable test procedures – General guidance) <i>First Revision</i>)
5	LITD 11 (23480) IS /IEC 60794-2- 10:2023	Optical Fibre Cables Part 2 Indoor Optical Fibre Cables Section 10 Family specification for simplex and duplex cables (<i>First Revision</i>)

ITEM 5 GUIDELINES FOR RESEARCH & DEVELOPMENT (R&D) PROJECTS FOR THE FORMULATION AND REVIEW OF STANDARDS INVITING POTENTIAL R&D PROJECTS FROM THE COMMITTEE MEMBERS

Bureau of Indian Standards (BIS) has issued Guidelines for Research & Development (R&D) Projects for the formulation and review of standards inviting potential R&D projects from the committee members.

Guidelines for Research and Development projects and the template for the Terms of Reference (ToR) were shared during the last meeting for the members' perusal.

During the last meeting, the following proposal was received, further it was decided to discuss it in this meeting:

- Requirements for the Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres. Detail given in Annex-3.

MEMBERS MAY PROPOSE POTENTIAL R&D PROJECTS PERTAINING TO STANDARD

ITEM 6 PROGRAM OF WORK

6.1 The present program of work of LITD 11 is given in Annex-4.

THE COMMITTEE MAY NOTE

ITEM 7 INTERNATIONAL ACTIVITIES

7.1 Presently, LITD 11 acts as National Mirror Committee of IEC/TC 86, SC 86A, SC 86B and SC 86C (IEC/TC 86, SC 86A, SC 86B - Participating Member and SC 86C India - Observer Member)

7.2 India being Participating member on TC 86, 86 A, and 86B has obligations to vote on the document emanating from these committees.

7.3 The list of working groups under IEC/TC 86 and its Sub-Committees are given below:

S. No.	Title	Subcommittee/Working Groups	Expert
1	TC 86 Fibre optics	WG 1 Terminology and symbology	Mr. Rakesh Desai
		WG 4 Fibre optic test equipment calibration	Mr Komal P Barhate
		JWG 9 Optical functionality for electronic assemblies linked to TC 91	-
		JAG 10 (Joint Advisory Group) Laser safety linked to TC 76	-

S. No.	Title	Subcommittee/Working Groups	Expert
2	SC 86A Fibres and cables	WG 1 Fibres and associated measuring methods	Mr Sudipta Bhaumik, Mr. Roshan Kumar, Dr. Ranjan Sen, Mr. Bipin Jambholkar
		WG 3 Cables	Mr. Sudipta Bhaumik, Dr. Ranjan Sen Mr. Bipin Jambholkar Mr. Ashish Tiwari
		TC 18/SC 18A/JWG 3 Electrical installations in ships – Part 378: Optical fiber cables Managed by SC 18A	None
		TC 46/JWG 1 Raw materials and environmental issues Managed by TC 46	None
		TC 46/SC 46C/JWG 862807 Managed by SC 46C	Mr. Sudipta Bhaumik
		TC 86/SC 86B/JWG 8 with 86A - Terminated Cable	Mr. Sudipta Bhaumik

		Assemblies Managed by SC 86B	
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S. No.	Title	Subcommittee/Working Groups	Expert
3	SC 86B Fibre optic interconnecting devices and passive components	WG 4 Standard tests and measurement methods for fibre optic interconnecting devices and passive components	Mr. Sudipta Bhaumik Mr Komal P Barhate
		WG 6 Standards and specifications for fibre optic interconnecting devices and related components	Mr.Rakesh Desai Mr.Sudipta Bhaumik
		WG 7 Standards and specifications for fibre optic passive components	Mr. Sudipta Bhaumik
		Joint Working Groups; JWG 8 with 86A - Terminated Cable Assemblies	Mr. Sudipta Bhaumik
		Editing Group EG 1: Editing IEC 61300-3-35/Ed2	None

S. No.	Title	Subcommittee/Working Groups	Expert
4	SC 86C Fibre optic systems and active devices (O-Member)	WG 1 Fibre optic communications systems and sub-systems	None
		WG 2 Fibre optic sensors	None
		WG 3 Optical amplifiers	None
		WG 4 Fibre optic active components and devices	None

THE COMMITTEE MAY REVIEW

7.4 Plenary Meetings of IEC TC 86

7.4.1 Upcoming Meeting of IEC TC 86

The schedule of the upcoming plenary meeting of TC 86 and its SCs 'Fibre optics' is as follows:

Committee	Date	Place
TC 86	28 Oct to 06 Nov 2024	Mexico (Queretaro City)

The agenda for next TC 86 Plenary meeting is given in Annex-5. Members were encouraged to consider their participation in the plenary meeting of IEC TC 86, SC 86A & SC 86B. Based on the inputs received, the following proposed Indian delegation was approved by the committee for consideration of the competent authority of BIS for participation in these meetings:

1. Sh Rakesh Desai, Chair, LITD 11
2. Sh Sudipta Bhowmik, Sterlite Technologies
3. Sh Priyanshu Sharma, Member Secretary (LITD 11)

THE COMMITTEE MAY FINALIZE THE INB CONTRIBUTIONS & THE INDIAN DELEGATION FOR THE NEXT PLENARY MEETING

ITEM 8 DOCUMENTS DUE FOR VOTING

8.1 Following documents of IEC/TC 86, SC 86A, SC 86B, SC 86C have been circulated for inputs of committee members. The last date to provide inputs is also mentioned below. Members are requested to provide their inputs before the due date to the BIS secretariat:

Sl. No	Reference No	Title	Due Date for Voting
1.	86C/1933/CDV	IEC 62007-2 ED3: Semiconductor optoelectronic devices for fibre optic system applications - Part 2: Measuring methods	01/10/2024
2.	86B/4948/CD	IEC 61300-2-50 ED2: Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-50: Tests - Fibre optic connector proof test with static load	11/10/2024
3.	86A/2470/CDV	IEC 60793-2-60 ED2: Optical fibres - Part 2-60: Product specifications - Sectional specification for category C single-mode interconnection fibres	11/10/2024
4.	86B/4953/Q	Nomination of a Project Leader for IEC 61300-2-33 ED4: Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-33: Tests - Assembly and disassembly of fibre optic mechanical splices, fibre management systems and protective housings	18/10/2024
5.	86B/4950/CD	IEC 61753-022-07 ED1: Fibre optic interconnecting devices and passive components – Performance standard – Part 022-07: Hardened fibre optic connectors terminated on multimode fibre for category A – Outdoor aerial environment	25/10/2024
6.	86B/4956/Q	Nomination of a Project Leader for IEC 61300-2-37 ED4: Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-37: Tests - Cable bending for fibre optic protective housings and hardened connectors	01/11/2024
7.	86A/2484/CDV	IEC 60794-1-119 ED1: Optical fibre cables - Part 1-119: Generic specification - Basic optical cable test procedures - Aeolian Vibration, Method E19	08/11/2024
8.	86A/2492/DTR	IEC TR 63431 ED1: Optical fibre cables – Microduct technology – Guidance	08/11/2024

9.	86A/2496/CD	IEC 60794-1-103 ED1: Optical fibre cables - Part 1-103: Generic specification - Basic optical cable test procedures - Mechanical tests methods – Crush, Method E3	15/11/2024
10.	86B/4938/CDV	IEC 61300-2-5/AMD1 ED4: Amendment 1 - Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-5: Tests - Torsion	15/11/2024
11.	86B/4939/CDV	IEC 61300-3-7/AMD1 ED3: Amendment 1 - Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-7: Examinations and measurements - Wavelength dependence of attenuation and return loss of single mode components	15/11/2024

ITEM 9 DATE AND PLACE FOR THE NEXT MEETING

ITEM 10 ANY OTHER BUSINESS

Scope

To prepare Indian Standard for fibre optics systems and associated components and devices intended for use with communications equipment and devices employing similar techniques

Composition

S. No.	Organization	Member Name	Role
1.	Department of Telecommunications, Ministry of Communications and Information Technology, New Delhi	Shri Rakesh Desai	Chairperson
2.	Aksh Optifibre Limited, New Delhi	Shri Anil Gupta	Principal Member
		Shri Sam Mathew	Principal Member
3.	Birla Ericsson Optical Limited, New Delhi	Shri Narendra Jain	Alternate Member
		Shri V. P. Singh	Principal Member
4.	CSIR - Central Electronics Engineering Research Institute, Pilani	Dr Suchandan Pal	Principal Member
		Shri Kuldeep Singh	Alternate Member
5.	CSIR - Central Glass and Ceramic Research Institute, Kolkata	Dr. Mukul Chandra Paul	Alternate Member
		Dr. Somnath Bandyopadhyay	Principal Member
6.	CSIR - Central Scientific Instruments Organization, Chandigarh	Dr Samir Mondal	Alternate Member
		Prof. S. Anantha Ramakrishna	Principal Member
7.	Centre for Development of Telematics, New Delhi	Shri Prashant Kumar Rathore	Alternate Member
		Shri Atul Kumar Gupta	Principal Member
8.	Consumer Electronics and Appliances Manufacturers Association, Noida	Shri Saurabh Kumar Singh	Alternate Member
9.	Directorate General of Aeronautical Quality Assurance, New Delhi	Deputy Director (E & I)	Alternate Member
		Shri Komal P Barhate	Principal Member
10.	Directorate General of Quality Assurance, New Delhi	Shri Brig DDG T	Principal Member
		Col. Samir Kashyap	Alternate Member
11.	Directorate of Standardisation, Ministry of Defence, DTE of Standardization Government, New Delhi	Dr. P S Porwal	Principal Member
		BIS Cordinator	Alternate Member
12.	Finolex Cables Limited, Pune	Shri Mukund Sawant	Principal Member
		Shri Shaikh Sadik	Alternate Member
		Shri Mahadev Kadam	Alternate Member
13.	Himachal Futuristic Communications Limited, New Delhi	Shri Pramod Agrawal	Principal Member
		Shri Vivek Agrawal	Alternate Member

		Shri Stanley Chand	Alternate Member
14.	Indian Institute of Technology (ISM), Dhanbad	Dr. Vinod Kumar Singh	Principal Member
15.	Indian Institute of Technology Guwahati, Guwahati	Dr Debabrata Sikdar	Principal Member
16.	Indian Institute of Technology Roorkee, Roorkee	Prof. Vipul Rastogi	Principal Member
		Shri Rajesh Kumar	Alternate Member
17.	National Institute of Technology Calicut, Kozhikode	Dr Raman Namboodiri C K	Principal Member
		Dr Anirban Sarkar	Alternate Member
18.	SFO Technologies Private Limited, Kochi	Shri Samuel Varghese	Principal Member
		Shri Thanuj. T. K	Alternate Member
19.	Sterlite Technologies Limited, Pune	Shri Sudipta Bhaumik	Principal Member
		Shri Roshan Kumar	Alternate Member
20.	Telecom Equipment Manufacturers Association, New Delhi	Shri N. K. Goyal	Principal Member
		Ms Manisha Kumari	Alternate Member
		Shri Sandeep Aggarwal	Alternate Member
21.	Telecommunication Engineering Center, New Delhi	Smt Kamla Pargai	Alternate Member
		Smt Ratna Thakur	Alternate Member
		Shri K L Chhabra	Principal Member
22.	IN PERSONAL CAPACITY	Dr Ranjan Sen	Personal Capacity