

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

L.26

(08/2015)

SERIES L: ENVIRONMENT AND ICTS, CLIMATE
CHANGE, E-WASTE, ENERGY EFFICIENCY;
CONSTRUCTION, INSTALLATION AND PROTECTION
OF CABLES AND OTHER ELEMENTS OF OUTSIDE
PLANT

Optical fibre cables for aerial application

Recommendation ITU-T L.26

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Summary

Recommendation ITU-T L.26 describes characteristics, construction and test methods of optical fibre cables for aerial application (including lashed cables), but does not apply to optical ground wire (OPGW) cables or metal armour self-supporting (MASS) cables. First, the characteristics affecting the satisfactory performance of optical fibre cables are described. Then, the methods of examining whether the cables have these required characteristics are described. The conditions required may differ according to the installation environment. Therefore, detailed conditions of experiments need to be agreed upon between a user and a supplier on the basis of the environment where the cable is used.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T L.26	1996-10-18	6	11.1002/1000/3890
2.0	ITU-T L.26	2002-12-22	6	11.1002/1000/6136
3.0	ITU-T L.26	2015-08-13	15	11.1002/1000/12533

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at <http://www.itu.int/ITU-T/ipr/>.

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Recommendation ITU-T L.26

Optical fibre cables for aerial application

1 Scope

This Recommendation:

- refers to single-mode optical fibre cables to be used in telecommunication networks for aerial installations in outside plants, excluding optical ground wire (OPGW) and metal armour self-supporting (MASS) cables;
- considers the mechanical and environmental characteristics of the aerial optical fibre cable (self-supporting cable and non self-supporting cable).

The optical fibre dimensional and transmission characteristics, together with their test methods, should comply with one or more of: [\[ITU-T G.651.1\]](#), [\[ITU-T G.652\]](#), [\[ITU-T G.653\]](#), [\[ITU-T G.654\]](#), [\[ITU-T G.655\]](#), [\[ITU-T G.656\]](#) or [\[ITU-T G.657\]](#);

- considers fundamental aspects related to optical fibre cable from mechanical and environmental points of view.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

- [\[ITU-T G.650.1\]](#) Recommendation ITU-T G.650.1 (2010), *Definitions and test methods for linear, deterministic attributes of single-mode fibre and cable.*
- [\[ITU-T G.650.2\]](#) Recommendation ITU-T G.650.2 (2007), *Definitions and test methods for statistical and non-linear related attributes of single-mode fibre and cable.*
- [\[ITU-T G.650.3\]](#) Recommendation ITU-T G.650.3 (2008), *Test methods for installed single-mode optical fibre cable links.*
- [\[ITU-T G.651.1\]](#) Recommendation ITU-T G.651.1 (2007), *Characteristics of a 50/125 μm multimode graded index optical fibre cable for the optical access network.*
- [\[ITU-T G.652\]](#) Recommendation ITU-T G.652 (2009), *Characteristics of a single-mode optical fibre and cable.*
- [\[ITU-T G.653\]](#) Recommendation ITU-T G.653 (2010), *Characteristics of a dispersion-shifted single-mode optical fibre and cable.*
- [\[ITU-T G.654\]](#) Recommendation ITU-T G.654 (2012), *Characteristics of a cut-off shifted single-mode optical fibre and cable.*
- [\[ITU-T G.655\]](#) Recommendation ITU-T G.655 (2009), *Characteristics of a non-zero dispersion-shifted single-mode optical fibre and cable.*
- [\[ITU-T G.656\]](#) Recommendation ITU-T G.656 (2010), *Characteristics of a fibre and cable with non-zero dispersion for wideband optical transport.*
- [\[ITU-T G.657\]](#) Recommendation ITU-T G.657 (2012), *Characteristics of a bending-loss insensitive single-mode optical fibre and cable for the access network.*

- [[ITU-T K.29](#)] Recommendation ITU-T K.29 (1992), *Coordinated protection schemes for telecommunication cables below ground.*
- [[ITU-T K.47](#)] Recommendation ITU-T K.47 (2012), *Protection of telecommunication lines against direct lightning flashes.*
- [[ITU-T L.1](#)] Recommendation ITU-T L.1 (1988), *Construction, installation and protection of telecommunication cables in public networks.*
- [[ITU-T L.14](#)] Recommendation ITU-T L.14 (1992), *Measurement method to determine the tensile performance of optical fibre cables under load.*
- [[ITU-T L.27](#)] Recommendation ITU-T L.27 (1996), *Method for estimating the concentration of hydrogen in optical fibre cables.*
- [[ITU-T L.46](#)] Recommendation ITU-T L.46 (2000), *Protection of telecommunication cables and plant from biological attack.*
- [IEC 60793-1-1] IEC 60793-1-1 (2008), *Optical fibres – Part 1-1: Measurement methods and test procedures– General and guidance.*
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- [IEC 60793-2-10] IEC 60793-2-10 (2011), *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres.*
- [IEC 60793-2-50] IEC 60793-2-50 (2012), *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres.*
- [IEC 60794-1-1] IEC 60794-1-1 (2011), *Optical fibre cables – Part 1-1: Generic specification – General.*
- [IEC 60794-1-2] IEC 60794-1-2 (2013), *Optical fibre cables – Part 1-2: Generic specification – Cross reference table for optical cable test procedures.*
- [IEC 60794-1-21] IEC 60794-1-21 (2015), *Optical fibre cables – Part 1-21: Generic specification – Basic optical cable test procedures – Mechanical tests methods.*
- [IEC 60794-1-22] IEC 60794-1-22 (2012), *Optical fibre cables – Part 1-22: Generic specification – Basic optical cable test procedures – Environmental tests methods.*
- [IEC 60794-1-23] IEC 60794-1-23 (2012), *Optical fibre cables – Part 1-23: Generic specification – Basic optical cable test procedures – Cable elements test methods.*
- [IEC 60794-3] IEC 60794-3 (2014), *Optical fibre cables – Part 3: Outdoor cables – Sectional specification.*
- [IEC 60794-3-10] IEC 60794-3-10 (2014), *Optical fibre cables – Part 3-10: Outdoor cables – Family specification for duct, directly buried, and lashed aerial single-mode optical fibre telecommunication cables.*
- [IEC 60794-3-20] IEC 60794-3-20 (2009), *Optical fibre cables – Part 3-20: Outdoor cables – Family specification for self-supporting aerial telecommunication cables.*
- [IEC 60794-4-20] IEC 60794-4-20 (2012), *Optical fibre cables – Part 4-20: Aerial optical cables along electrical power lines – Family specification for ADSS (All Dielectric Self Supported) optical cables.*