

**Optical fibre cables - Part 1-1: Generic specification -
General**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60794-1-1:2011 sisaldab Euroopa standardi EN 60794-1-1:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 60794-1-1:2011 consists of the English text of the European standard EN 60794-1-1:2011.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 02.12.2011.	Date of Availability of the European standard is 02.12.2011.
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English version

**Optical fibre cables -
Part 1-1: Generic specification -
General**
(IEC 60794-1-1:2011)

Câbles à fibres optiques -
Partie 1-1: Spécification générique -
Généralités
(CEI 60794-1-1:2011)

Lichtwellenleiterkabel -
Teil 1-1: Fachgrundspezifikation -
Allgemeines
(IEC 60794-1-1:2011)

This European Standard was approved by CENELEC on 2011-10-18. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 86A/1355/CDV, future edition 3 of IEC 60794-1-1, prepared by SC 86A, "Fibres and cables", of IEC/TC 86, "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60794-1-1:2011.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2012-07-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-10-18

This document supersedes EN 60794-1-1:2002¹⁾.

This standard shall be used in conjunction with EN 60794-1-2.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 60794-1-1:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

[1] IEC 60793-2-10 NOTE Harmonized as EN 60793-2-10.

¹⁾ For technical changes, see IEC foreword.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60189-1	-	Low-frequency cables and wires with PVC insulation and PVC sheath - Part 1: General test and measuring methods	-	-
IEC 60793-1-1	-	Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance	EN 60793-1-1	-
IEC 60793-1-21	-	Optical fibres - Part 1-21: Measurement methods and test procedures - Coating geometry	EN 60793-1-21	-
IEC 60793-1-22	-	Optical fibres - Part 1-22: Measurement methods and test procedures - Length measurement	EN 60793-1-22	-
IEC 60793-1-40	-	Optical fibres - Part 1-40: Measurement methods and test procedures - Attenuation	EN 60793-1-40	-
IEC 60793-1-46	-	Optical fibres - Part 1-46: Measurement methods and test procedures - Monitoring of changes in optical transmittance	EN 60793-1-46	-
IEC 60793-1-48	-	Optical fibres - Part 1-48: Measurement methods and test procedures - Polarization mode dispersion	EN 60793-1-48	-
IEC 60793-2	-	Optical fibres - Part 2: Product specifications - General	EN 60793-2	-
IEC 60794-1-2	2003	Optical fibre cables - Part 1-2: Generic specification - Basic optical cable test procedures	EN 60794-1-2	2003
IEC 60794-4-20	201X ¹⁾	Optical fibre cables - Part 4-20: Aerial optical cables along electrical power lines - Family specification for ADSS (All Dielectric Self Supported) Optical cables	EN 60794-4-20	201X ¹⁾
IEC 60811-201	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 201: General tests - Measurement of insulation thickness	EN 60811-201	-
IEC 60811-202	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 202: General tests - Measurement of thickness of non-metallic sheaths	EN 60811-202	-

¹⁾ At draft stage.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60811-203	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 203: General tests - Measurement of overall dimensions	EN 60811-203	-
ISO 14001	-	Environmental management systems - Requirements with guidance for use	EN ISO 14001	-
ISO 14064-1	-	Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals	EN ISO 14064-1	-

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OPTICAL FIBRE CABLES –

Part 1-1: Generic specification – General

1 Scope

This part of IEC 60794 applies to optical fibre cables for use with communication equipment and devices employing similar techniques and to cables having a combination of both optical fibres and electrical conductors.

The object of this standard is to establish uniform generic requirements for the geometrical, transmission, material, mechanical, ageing (environmental exposure), climatic and electrical properties of optical fibre cables, where appropriate.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60189-1, *Low-frequency cables and wires with PVC insulation and PVC sheath – Part 1: General test and measuring methods*

IEC 60793-1-1, *Optical fibres – Part 1-1: Measurement methods and test procedures – General and guidance*

IEC 60793-1-21, *Optical fibres – Part 1-21: Measurement methods and test procedures – Coating geometry*

IEC 60793-1-22, *Optical fibres – Part 1-22: Measurement methods and test procedures – Length measurement* IEC 60793-1-40, *Optical fibres – Part 1-40: Measurement methods and test procedures – Attenuation*

IEC 60793-1-40, *Optical fibres – Part 1-40: Measurement methods and test procedures – Attenuation*

IEC 60793-1-46, *Optical fibres – Part 1-46: Measurement methods and test procedures – Monitoring of changes in optical transmittance*

IEC 60793-1-48, *Optical fibres – Part 1-48: Measurement methods and test procedures – Polarization Mode Dispersion*

IEC 60793-2, *Optical fibres – Part 2: Product specifications – General*

IEC 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures*

IEC 60794-1-2:2003, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures*¹

IEC 60794-4-20:-2, *Optical fibre cables – Part 4-20: Aerial optical cables along electrical power lines – Family specification for ADSS (All Dielectric Self Supported) Optical cables*

IEC 60811-201, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 201: General tests – Measurement of insulation thickness*³

IEC 60811-202, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 202: General tests – Measurement of thickness of non-metallic sheath*⁴

IEC 60811-203, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 203: General tests – Measurement of overall dimensions*⁵

ISO 14001, *Environmental management systems – Requirements with guidance for use*

ISO 14064-1, *Greenhouse gases. Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*

3 Definitions

For the purpose of this document, the following definitions apply:

3.1

no change in attenuation

an acceptance criterion for attenuation measurement that includes an allowance for measurement uncertainty arising from measurement errors or calibration errors due to a lack of suitable reference standards

NOTE For a practical interpretation, see IEC 60794-1-20.

3.2

no change in fibre strain

an acceptance criterion for fibre strain measurement that includes an allowance for measurement uncertainty arising from measurement errors or calibration errors due to a lack of suitable reference standards

NOTE For a practical interpretation, see IEC 60794-1-20.

4 Optical fibre cables

Optical fibre cables, containing optical fibres and possibly electrical conductors, consist of the following types:

- indoor cables;
- patchcords;

¹ To be replaced by future IEC 60794-1-22.

² To be published.

³ To be published.

⁴ To be published.

⁵ To be published.