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Standards

Irish Standard  
I.S. EN 60794-1-1:2016

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

**I.S. EN 60794-1-1:2016**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 60794-1-1:2016 is the adopted Irish version of the European Document EN 60794-1-1:2016, Optical fibre cables - Part 1-1: Generic specification - General

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EUROPEAN STANDARD

**EN 60794-1-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2016

ICS 33.180.10

Supersedes EN 60794-1-1:2011

English Version

**Optical fibre cables - Part 1-1: Generic specification - General  
(IEC 60794-1-1:2015)**

Câbles à fibres optiques - Partie 1-1 : spécification  
générique - Généralités  
(IEC 60794-1-1:2015)

Lichtwellenleiterkabel - Teil 1-1: Fachgrundspezifikation -  
Allgemeines  
(IEC 60794-1-1:2015)

This European Standard was approved by CENELEC on 2015-12-18. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**EN 60794-1-1:2016****European foreword**

The text of document 86A/1651/CDV, future edition 4 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 60794-1-1:2016.

The following dates are fixed:

- latest date by which the document has to be (dop) 2016-09-18  
implemented at national level by  
publication of an identical national  
standard or by endorsement
- latest date by which the national (dow) 2018-12-18  
standards conflicting with the  
document have to be withdrawn

This document supersedes EN 60794-1-1:2011.

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 60794-1-1:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60793-2-10	NOTE	Harmonized as EN 60793-2-10.
IEC 60794-1-2	NOTE	Harmonized as EN 60794-1-2.
IEC 60794-1-23	NOTE	Harmonized as EN 60794-1-23.
IEC 60794-1-24	NOTE	Harmonized as EN 60794-1-24.
IEC 60794-4:2003	NOTE	Harmonized as EN 60794-4:2003.
IEC 60794-4-20:2012	NOTE	Harmonized as EN 60794-4-20:2012.
IEC 60794-4 (series)	NOTE	Harmonized as EN 60794-4:2003 (series).

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<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 60304	-	Standard colours for insulation for low-frequency cables and wires	HD 402 S2	-
IEC 60793-1-21	-	Optical fibres -- Part 1-21: Measurement methods and test procedures - Coating geometry	EN 60793-1-21	-
IEC 60793-1-40	-	Optical fibres -- Part 1-40: Measurement methods and test procedures - Attenuation	EN 60793-1-40	-
IEC 60793-1-44	-	Optical fibres -- Part 1-44: Measurement methods and test procedures - Cut-off wavelength	EN 60793-1-44	-
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 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	-
IEC 60794-1-21	-	Optical fibre cables -- Part 1-21: Generic specification - Basic optical cable test procedures - Mechanical tests methods	EN 60794-1-21	-
IEC 60794-1-22	-	Optical fibre cables -- Part 1-22: Generic specification - Basic optical cable test procedures - Environmental test methods	EN 60794-1-22	-
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 sheath	EN 60811-202	-
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	-	-

**I.S. EN 60794-1-1:2016**

**EN 60794-1-1:2016**

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	-
IEC/TR 61931	-	Fibre optic - Terminology	-	-





**IEC 60794-1-1**

Edition 4.0 2015-11

# **INTERNATIONAL STANDARD**



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



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**IEC 60794-1-1**

Edition 4.0 2015-11

# INTERNATIONAL STANDARD



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

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### OPTICAL FIBRE CABLES –

#### Part 1-1: Generic specification – General

#### FOREWORD

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International Standard IEC 60794-1-1 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This fourth edition cancels and replaces the third edition, published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) the expansion of the definitions, graphical symbols, terminology and abbreviations content, with the aim of making this standard the default and reference for all others in the IEC 60794-x series;
- b) the inclusion of updated and expanded optical fibre, attenuation and bandwidth sections, with the aim of making this standard the default and reference for all others in the IEC 60794-x series.

The text of this standard is based on the following documents:

CDV	Report on voting
86A/1651/CDV	86A/1667/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

A list of all parts in the IEC 60794 series, published under the general title *Optical fibre cables*, can be found on the IEC website.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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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 and cable elements, where appropriate.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 60304, *Standard colours for insulation for low-frequency cables and wires*

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

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

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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 60793-2-50, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*

IEC 60794-1-21, *Optical fibre cables – Part 1-21: Generic specification – Basic optical cable test procedures – Mechanical tests methods*

IEC 60794-1-22, *Optical fibre cables – Part 1-22: Generic specification – Basic optical cable test procedures – Environmental tests methods*



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