

Optical fibre cables - Part 1-22: Generic specification -  
Basic optical cable test procedures - Environmental test  
methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|                                                                                                                       |                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| See Eesti standard EVS-EN IEC 60794-1-22:2018 sisaldab Euroopa standardi EN IEC 60794-1-22:2018 ingliskeelset teksti. | This Estonian standard EVS-EN IEC 60794-1-22:2018 consists of the English text of the European standard EN IEC 60794-1-22:2018.    |
| 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 02.02.2018.   | Date of Availability of the European standard is 02.02.2018.                                                                       |
| Standard on kättesaadav Eesti Standardikeskusest.                                                                     | The standard is available from the Estonian Centre for Standardisation.                                                            |

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ICS 33.180.10

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English Version

**Optical fibre cables - Part 1-22: Generic specification - Basic  
optical cable test procedures - Environmental test methods  
(IEC 60794-1-22:2017)**

Câbles à fibres optiques - Partie 1-22 : Spécification  
générique - Procédures fondamentales d'essais des câbles  
optiques - Méthodes d'essai d'environnement  
(IEC 60794-1-22:2017)

Lichtwellenleiterkabel - Teil 1-22: Fachgrundspezifikation -  
Grundlegende Prüfverfahren für Lichtwellenleiterkabel -  
Prüfverfahren zur Umweltprüfung  
(IEC 60794-1-22:2017)

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European Committee for Electrotechnical Standardization  
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Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## European foreword

The text of document 86A/1813/FDIS, future edition 2 of IEC 60794-1-22, 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 IEC 60794-1-22:2018.

The following dates are fixed:

- latest date by which the document has to be (dop) 2018-08-09  
implemented at national level by  
publication of an identical national  
standard or by endorsement
- latest date by which the national (dow) 2020-11-09  
standards conflicting with the  
document have to be withdrawn

This document supersedes EN 60794-1-22:2012.

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

## Endorsement notice

The text of the International Standard IEC 60794-1-22:2017 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 60794-1-2  | NOTE | Harmonized as EN 60794-1-2.  |
| IEC 60794-1-21 | NOTE | Harmonized as EN 60794-1-21. |
| IEC 60794-1-22 | NOTE | Harmonized as EN 60794-1-22. |
| IEC 60794-1-23 | NOTE | Harmonized as EN 60794-1-23. |
| IEC 60794-1-24 | NOTE | Harmonized as EN 60794-1-24. |

## Annex ZA (normative)

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

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where 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).

| Publication    | Year | Title                                                                                                                                  | EN/HD         | Year |
|----------------|------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|------|
| IEC 60068-2-14 | 2009 | Environmental testing -- Part 2-14: Tests - Test N: Change of temperature                                                              | EN 60068-2-14 | 2009 |
| IEC 60304      | -    | Standard colours for insulation for low-frequency cables and wires                                                                     | HD 402 S2     | -    |
| IEC 60544-1    | -    | Electrical insulating materials - Determination of the effects of ionizing radiation -- Part 1: Radiation interaction and dosimetry    | EN 60544-1    | -    |
| 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 60793-1-54 | -    | Optical fibres -- Part 1-54: Measurement methods and test procedures - Gamma irradiation                                               | EN 60793-1-54 | -    |
| IEC 60794-1-1  | -    | Optical fibre cables - Part 1-1: Generic specification - General                                                                       | EN 60794-1-1  | -    |
| IEC 60811-503  | -    | Electric and optical fibre cables - Test methods for non-metallic materials -- Part 503: Mechanical tests - Shrinkage test for sheaths | EN 60811-503  | -    |
| ISO 4892-2     | -    | Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps                                                   | EN ISO 4892-2 | -    |
| ISO 4892-3     | -    | Plastics - Methods of exposure to laboratory light sources - Part 3: Fluorescent UV lamps                                              | EN ISO 4892-3 | -    |

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## INTRODUCTION

IEC 60794-1-2:2003 has been split into five new documents:

- IEC 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures – General guidance*
- 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*
- IEC 60794-1-23, *Optical fibre cables – Part 1-23: Generic specification – Basic optical cable test procedures – Cable elements tests methods*
- IEC 60794-1-24, *Optical fibre cables – Part 1-24: Generic specification – Basic optical cable test procedures – Electrical tests methods*

## OPTICAL FIBRE CABLES –

### Part 1-22: Generic specification – Basic optical cable test procedures – Environmental test methods

#### 1 Scope

This part of IEC 60794 defines test procedures to be used in establishing uniform requirements for the environmental performance of

- optical fibre cables for use with telecommunication equipment and devices employing similar techniques, and
- cables having a combination of both optical fibres and electrical conductors.

Throughout this document, the wording "optical cable" can also include optical fibre units, microduct fibre units, etc.

See IEC 60794-1-2 for a reference guide to test methods of all types and for general requirements and definitions.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60068-2-14:2009, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60304, *Standard colours for insulation for low-frequency cables and wires*

IEC 60544-1, *Electrical insulating materials – Determination of the effects of ionizing radiation – Part 1: Radiation interaction and dosimetry*

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 60793-1-54, *Optical fibres – Part 1-54: Measurement methods and test procedures – Gamma irradiation*

IEC 60794-1-1, *Optical fibre cables – Part 1-1: Generic specification – General*

IEC 60811-503, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 503: Mechanical tests – Shrinkage test for sheaths*

ISO 4892-2, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*