ICS 33.180.10 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2026

STN	**Optické káble Časť 1-207: Kmeňová špecifikácia Základné skúšobné postupy na optické káble Skúšobné metódy vplyvu prostredia Jadrové žiarenie, metóda F7**	**STN EN IEC 60794-1-207** 35 9223

Optical fibre cables - Part 1-207: Generic specification - Basic optical cable test procedures - Environmental test methods - Nuclear radiation, Method F7

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/26

Táto norma čiastočne nahrádza normu STN EN IEC 60794-1-22 z júla 2018. Súbežná platnosť do 31. 12. 2028.

Obsahuje: EN IEC 60794-1-207:2025, IEC 60794-1-207:2025

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60794-1-207

December 2025

ICS 33.180.10

Supersedes EN IEC 60794-1-22:2018 (partially)

English Version

Optical fibre cables - Part 1-207: Generic specification - Basic optical cable test procedures - Environmental test methods - Nuclear radiation, Method F7 (IEC 60794-1-207:2025)

Câbles à fibres optiques - Partie 1-207: Spécification générique - Procédures fondamentales d'essais des câbles optiques - Méthodes d'essais d'environnement - Rayonnement nucléaire, Méthode F7
(IEC 60794-1-207:2025)

Lichtwellenleiterkabel - Teil 1-207: Fachgrundspezifikation - Grundlegende Prüfverfahren für Lichtwellenleiterkabel - Umweltprüfverfahren - Kernstrahlung, Verfahren F7
(IEC 60794-1-207:2025)

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

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

Ref. No. EN IEC 60794-1-207:2025 E

European foreword

The text of document 86A/2384/CDV, future edition 1 of IEC 60794-1-207, 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 60794-1-207:2025.

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) 2026-12-31
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-12-31

This document partially supersedes EN IEC 60794-1-22:2018 and all of its amendments and corrigenda (if any).

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60794-1-207:2025 was approved by CENELEC as a European Standard without any modification.

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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60544-1	-	Electrical insulating materials - Determination of the effects of ionizing radiation - Part 1: Radiation interaction and dosimetry	EN 60544-1	-
IEC 60793-1-46	-	Optical fibres - Part 1-46: Measurement methods and test procedures - Monitoring of changes in attenuation	EN IEC 60793-1-46	-
IEC 60793-1-54	-	Optical fibres - Part 1-54: Measurement methods and test procedures - Gamma irradiation	EN IEC 60793-1-54	-
IEC 60794-1-2	-	Optical fibre cables - Part 1-2: Generic specification - Basic optical cable test procedures - General guidance	EN IEC 60794-1-2	-
IEC 60794-1-201	-	Optical fibre cables - Part 1-201: Generic specification - Basic optical cable test procedures - Environmental test methods - Temperature cycling, method F1	EN IEC 60794-1-201	-
IEC 60794-1-209	-	Optical fibre cables - Part 1-209: Generic specification - Basic optical cable test procedures - Environmental test methods - Ageing, method F9	EN IEC 60794-1-209	-

IEC 60794-1-207

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INTERNATIONAL STANDARD

Optical fibre cables -
Part 1-207: Generic specification - Basic optical cable test procedures - Environmental test methods - Nuclear radiation, Method F7

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Optical fibre cables - Part 1-207: Generic specification - Basic optical cable test procedures - Environmental test methods - Nuclear radiation, Method F7

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 60794-1-207 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics. It is an International Standard.

This first edition cancels and replaces the method F7 of the second edition of IEC 60794-1-22 published in 2017. This edition constitutes a technical revision.

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

a) detailed content of sample, apparatus, procedure, requirements and details of the method to be specified and reported are added.

The text of this International Standard is based on the following documents:

Draft	Report on voting
86A/2384/CDV	86A/2512A/RVC

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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.

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

– reconfirmed,
– withdrawn, or
– revised.

INTRODUCTION

The environmental test contained in IEC 60794-1-22:2017 will now be individually numbered in the IEC 60794-1-2xx series. Each test method is now considered to be an individual document rather than part of a multi-test method compendium. Full cross-reference details are given in IEC 60794-1-2.

1 Scope

This part of IEC 60794 describes test procedures to be used in establishing uniform requirements for optical fibre cables for the environmental property: performance degradation when exposed to nuclear radiation.

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

Method F7A evaluates performance degradation of optical fibre cable in environmental background radiation; Method F7B evaluates performance degradation of optical fibre cable in adverse nuclear environments.

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

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

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

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IEC 60794-1-201, *Optical fibre cables - Part 1-201: Generic specification - Basic optical cable test procedures - Environmental test methods - Temperature cycling, method F1*

IEC 60794-1-209, *Optical fibre cables - Part 1-209: Generic specification - Basic optical cable test procedures - Environmental test methods - Ageing, method F9*