

<b>STN</b>	<b>Optické vlákna</b> <b>Časť 1-1: Metódy merania a skúšobné postupy</b> <b>Všeobecne a návod</b>	<b>STN</b> <b>EN IEC 60793-1-1</b>  35 9213
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Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance

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. 11/22

Obsahuje: EN IEC 60793-1-1:2022, IEC 60793-1-1:2022

Oznámením tejto normy sa od 25.07.2025 ruší  
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NORME EUROPÉENNE  
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**EN IEC 60793-1-1**

August 2022

ICS 33.180.10

Supersedes EN 60793-1-1:2017

English Version

**Optical fibres - Part 1-1: Measurement methods and test  
procedures - General and guidance  
(IEC 60793-1-1:2022)**

Fibres optiques - Partie 1-1: Méthodes de mesure et  
procédures d'essai - Généralités et recommandations  
(IEC 60793-1-1:2022)

Lichtwellenleiter - Teil 1-1: Messmethoden und  
Prüfverfahren - Allgemeines und Leitfaden  
(IEC 60793-1-1:2022)

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Europäisches Komitee für Elektrotechnische Normung

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

**EN IEC 60793-1-1:2022 (E)****European foreword**

The text of document 86A/2166/CDV, future edition 5 of IEC 60793-1-1, 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 IEC 60793-1-1:2022.

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) 2023-04-25
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-07-25

This document supersedes EN 60793-1-1:2017 and all of its amendments and corrigenda (if any).

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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 60793-1-1:2022 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 (series)      NOTE Harmonized as EN 60793-2 (series)

ISO 80000-1:2009      NOTE Harmonized as EN ISO 80000-1:2013 (not modified)

## 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).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-1-20	-	Optical fibres - Part 1-20: Measurement methods and test procedures - Fibre geometry	EN 60793-1-20	-
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 60793-1-30	-	Optical fibres - Part 1-30: Measurement methods and test procedures - Fibre proof test	EN 60793-1-30	-
IEC 60793-1-31	-	Optical fibres - Part 1-31: Measurement methods and test procedures - Tensile strength	EN IEC 60793-1-31	-
IEC 60793-1-32	-	Optical fibres - Part 1-32: Measurement methods and test procedures - Coating strippability	EN IEC 60793-1-32	-
IEC 60793-1-33	-	Optical fibres - Part 1-33: Measurement methods and test procedures - Stress corrosion susceptibility	EN 60793-1-33	-
IEC 60793-1-34	-	Optical fibres - Part 1-34: Measurement methods and test procedures - Fibre curl	EN IEC 60793-1-34	-
IEC 60793-1-40	-	Optical fibres - Part 1-40: Attenuation measurement methods	EN IEC 60793-1-40	-
IEC 60793-1-41	-	Optical fibres - Part 1-41: Measurement methods and test procedures - Bandwidth	EN 60793-1-41	-
IEC 60793-1-42	-	Optical fibres - Part 1-42: Measurement methods and test procedures - Chromatic dispersion	EN 60793-1-42	-

**EN IEC 60793-1-1:2022 (E)**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-1-43	-	Optical fibres - Part 1-43: Measurement methods and test procedures - Numerical aperture measurement	EN 60793-1-43	-
IEC 60793-1-44	-	Optical fibres - Part 1-44: Measurement methods and test procedures - Cut-off wavelength	EN 60793-1-44	-
IEC 60793-1-45	-	Optical fibres - Part 1-45: Measurement methods and test procedures - Mode field diameter	EN IEC 60793-1-45	-
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 60793-1-47	-	Optical fibres - Part 1-47: Measurement methods and test procedures - Macrobending loss	EN IEC 60793-1-47	-
IEC 60793-1-48	-	Optical fibres - Part 1-48: Measurement methods and test procedures - Polarization mode dispersion	EN 60793-1-48	-
IEC 60793-1-49	-	Optical fibres - Part 1-49: Measurement methods and test procedures - Differential mode delay	EN IEC 60793-1-49	-
IEC 60793-1-50	-	Optical fibres - Part 1-50: Measurement methods and test procedures - Damp heat (steady state) tests	EN 60793-1-50	-
IEC 60793-1-51	-	Optical fibres - Part 1-51: Measurement methods and test procedures - Dry heat (steady state) tests	EN 60793-1-51	-
IEC 60793-1-52	-	Optical fibres - Part 1-52: Measurement methods and test procedures - Change of temperature tests	EN 60793-1-52	-
IEC 60793-1-53	-	Optical fibres - Part 1-53: Measurement methods and test procedures - Water immersion tests	EN 60793-1-53	-
IEC 60793-1-54	-	Optical fibres - Part 1-54: Measurement methods and test procedures - Gamma irradiation	EN IEC 60793-1-54	-
IEC 60793-1-60	-	Optical fibres - Part 1-60: Measurement methods and test procedures - Beat length	EN 60793-1-60	-
IEC 60793-1-61	-	Optical fibres - Part 1-61: Measurement methods and test procedures - Polarization crosstalk	EN 60793-1-61	-
IEC 60793-2	-	Optical fibres - Part 2: Product specifications - General	EN IEC 60793-2	-



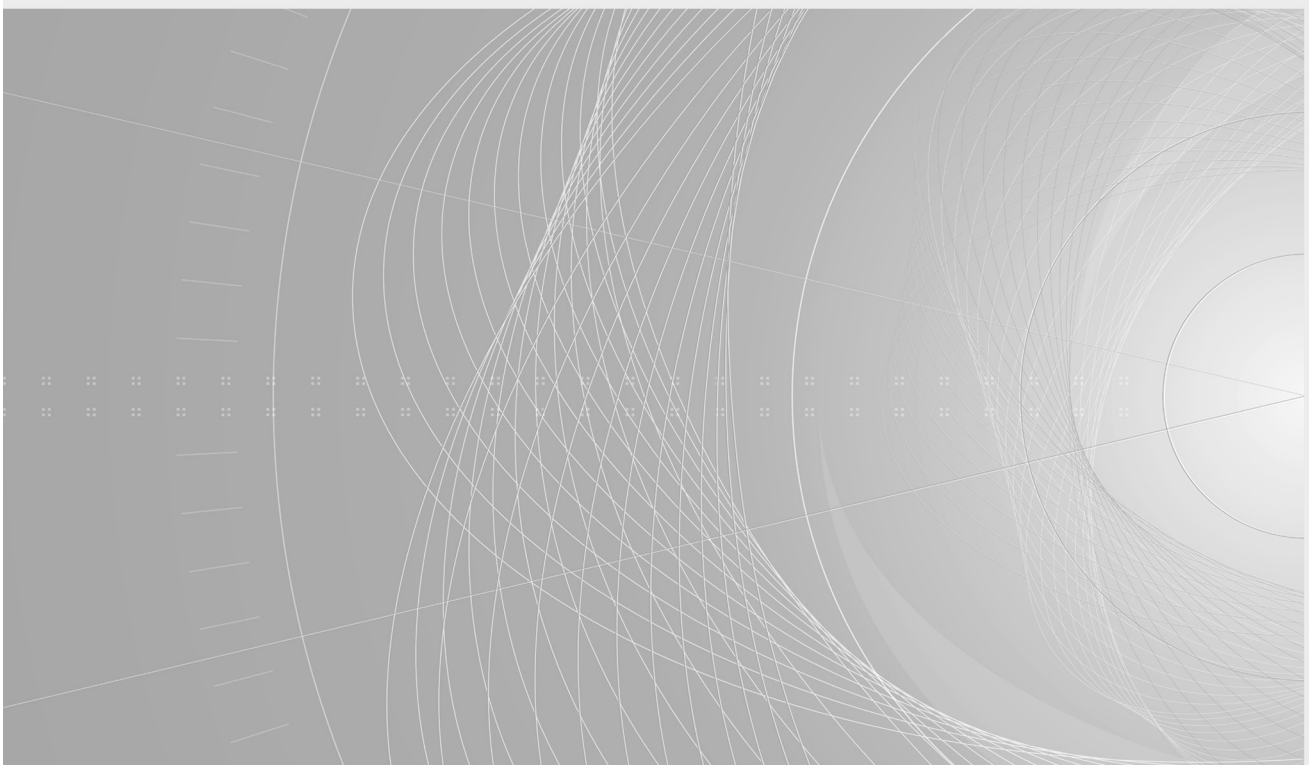
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Edition 5.0 2022-06

# INTERNATIONAL STANDARD

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



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IEC Secretariat  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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The world's leading online dictionary on electrotechnology, containing more than 22 300 terminological entries in English and French, with equivalent terms in 19 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.



IEC 60793-1-1

Edition 5.0 2022-06

# INTERNATIONAL STANDARD

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

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## OPTICAL FIBRES –

### Part 1-1: Measurement methods and test procedures – General and guidance

#### 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 60793-1-1 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 2017. This edition constitutes a technical revision.

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

- a) changes in normative references;
- b) renamed Clause 10 and added documentation-related requirements in a new subclause 10.2.

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

Draft	Report on voting
86A/2166/CDV	86A/2203/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts in the IEC 60793 series, published under the general title *Optical fibres*, 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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

## INTRODUCTION

Publications in the IEC 60793-1 series concern measurement methods and test procedures as they apply to optical fibres.

The documents are categorized as follows:

- Measurement methods and test procedures for dimensions
- Measurement methods and test procedures for mechanical characteristics
- Measurement methods and test procedures for transmission and optical characteristics
- Measurement methods and test procedures for environmental characteristics
- Measurement methods and test procedures for polarization-maintaining fibres

## OPTICAL FIBRES –

### Part 1-1: Measurement methods and test procedures – General and guidance

#### 1 Scope

This part of IEC 60793 lists and gives guidance on the use of documents giving uniform requirements for measuring and testing optical fibres, thereby assisting in the inspection of fibres and cables for commercial (mostly telecommunications) purposes.

The individual measurement and test methods are contained in the different parts of the IEC 60793 series. They are identified as IEC 60793-1-X, where "X" is an assigned sub-part number, indicating its affiliation to the IEC 60793-1 series.

In general, measurements and tests methods apply to all class A multimode fibres and class B and class C single-mode optical fibres covered by the IEC 60793-2 series relating to product specifications, although there can be exceptions. Clause 1 of each part of the IEC 60793 series contains the scope for each particular attribute.

#### 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 60793-1-20, *Optical fibres – Part 1-20: Measurement methods and test procedures – Fibre geometry*

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 60793-1-30, *Optical fibres – Part 1-30: Measurement methods and test procedures – Fibre proof test*

IEC 60793-1-31, *Optical fibres – Part 1-31: Measurement methods and test procedures – Tensile strength*

IEC 60793-1-32, *Optical fibres – Part 1-32: Measurement methods and test procedures – Coating strippability*

IEC 60793-1-33, *Optical fibres – Part 1-33: Measurement methods and test procedures – Stress corrosion susceptibility*

IEC 60793-1-34, *Optical fibres – Part 1-34: Measurement methods and test procedures – Fibre curl*

IEC 60793-1-40, *Optical fibres – Part 1-40: Attenuation measurement methods*

IEC 60793-1-41, *Optical fibres – Part 1-41: Measurement methods and test procedures – Bandwidth*

IEC 60793-1-42, *Optical fibres – Part 1-42: Measurement methods and test procedures – Chromatic dispersion*

IEC 60793-1-43, *Optical fibres – Part 1-43: Measurement methods and test procedures – Numerical aperture measurement*

IEC 60793-1-44, *Optical fibres – Part 1-44: Measurement methods and test procedures – Cut-off wavelength*

IEC 60793-1-45, *Optical fibres – Part 1-45: Measurement methods and test procedures – Mode field diameter*

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

IEC 60793-1-47, *Optical fibres – Part 1-47: Measurement methods and test procedures – Macrobending loss*

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

IEC 60793-1-49, *Optical fibres – Part 1-49: Measurement methods and test procedures – Differential mode delay*

IEC 60793-1-50, *Optical fibres – Part 1-50: Measurement methods and test procedures – Damp heat (steady state) tests*

IEC 60793-1-51, *Optical fibres – Part 1-51: Measurement methods and test procedures – Dry heat (steady state) tests*

IEC 60793-1-52, *Optical fibres – Part 1-52: Measurement methods and test procedures – Change of temperature tests*

IEC 60793-1-53, *Optical fibres – Part 1-53: Measurement methods and test procedures – Water immersion tests*

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

IEC 60793-1-60, *Optical fibres – Part 1-60: Measurement methods and test procedures – Beat length*

IEC 60793-1-61, *Optical fibres – Part 1-61: Measurement methods and test procedures – Polarization crosstalk*

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

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**