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Optical fibres - Part 2: Product specifications - General

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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EUROPEAN STANDARD

EN IEC 60793-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2019

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Supersedes EN 60793-2:2016 and all of its amendments
and corrigenda (if any)

English Version

**Optical fibres - Part 2: Product specifications - General
(IEC 60793-2:2019)**

Fibres optiques - Partie 2: Spécifications de produits -
Généralités
(IEC 60793-2:2019)

Lichtwellenleiter - Teil 2: Produktspezifikationen -
Allgemeines
(IEC 60793-2:2019)

This European Standard was approved by CENELEC on 2019-12-19. 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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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

European foreword

The text of document 86A/1964/FDIS, future edition 9 of IEC 60793-2, 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 60793-2:2019.

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) 2020-09-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-12-19

This document supersedes EN 60793-2:2016 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.

Endorsement notice

The text of the International Standard IEC 60793-2:2019 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.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60304	-	Standard colours for insulation for low-frequency cables and wires	HD 402 S2	-
IEC 60793-1	series	Optical fibres - Part 1: Measurement methods and test procedures	EN 60793-1	series
IEC 60793-2-10	2019	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN IEC 60793-2-10	2019
IEC 60793-2-20	2015	Optical fibres - Part 2-20: Product specifications - Sectional specification for category A2 multimode fibres	EN 60793-2-20	2016
IEC 60793-2-30	2015	Optical fibres - Part 2-30: Product specifications - Sectional specification for category A3 multimode fibres	EN 60793-2-30	2015
IEC 60793-2-40	2015	Optical fibres - Part 2-40: Product specifications - Sectional specification for category A4 multimode fibres	EN 60793-2-40	2016
IEC 60793-2-50	2018	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN IEC 60793-2-50	2019
IEC 60793-2-60	2008	Optical fibres - Part 2-60: Product specifications - Sectional specification for category C single-mode intraconnection fibres	EN 60793-2-60	2008
IEC 60793-2-70	2017	Optical fibres - Part 2-70: Product specifications - Sectional specification for polarization-maintaining fibres	EN 60793-2-70	2017

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRES –**Part 2: Product specifications –
General****FOREWORD**

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International Standard IEC 60793-2 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This ninth edition cancels and replaces the eighth edition published in 2015. This edition constitutes a technical revision.

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

- a) introduction of the revised fibre designations for most A1 sub-category fibres and all class B single-mode fibres;
- b) addition of the new fibre model (A1-OM5) defined for A1 category;
- c) addition of class D polarization maintaining fibres.

This document is to be read in conjunction with those parts of the IEC 60793-1 series that address individual measurements and tests for attributes of optical fibres.

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

FDIS	Report on voting
86A/1964/FDIS	86A/1974/RVD

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

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

A list of all the 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 "<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.

OPTICAL FIBRES –

Part 2: Product specifications – General

1 Scope

This part of IEC 60793 contains the general specifications for both multimode and single-mode optical fibres.

Sectional specifications for each of the four categories of multimode fibres: A1, A2, A3, and A4 (part of the multimode fibre class A) contain requirements specific to each category.

Sectional specifications for each of the three single-mode fibre classes, B, C and D contain requirements common to each class.

Each sectional specification includes family specifications (in normative annexes) that contain requirements for the applicable category or sub-categories. These sub-categories are distinguished on the basis of different fibre types or applications.

The requirements of this document apply to all classes.

Each sectional specification contains the requirements that are common to all the family specifications that are within it. These common requirements are copied to the family specification for ease of reference.

Tests or measurement methods are defined for each specified attribute. Where possible, these definitions are by reference to an IEC International Standard (see IEC 60793-1 series) – otherwise the test or measurement method is outlined in the relevant sectional specification.

Table 1 defines the sectional specifications. The relevant family specifications are defined within the sectional specifications as normative annexes (see Tables 2 to 5).

Annexes A and B summarize the existing fibre specifications.

Table 1 – Sectional specifications

Document ID	Fibre category/class	Cladding material	Core material	Index profile
IEC 60793-2-10	A1 multimode	Glass	Glass	Graded
IEC 60793-2-20	A2 multimode	Glass	Glass	Quasi-step or step
IEC 60793-2-30	A3 multimode	Plastic	Glass	Step or graded (under consideration)
IEC 60793-2-40	A4 multimode	Plastic	Plastic	Step, multi-step or graded
IEC 60793-2-50	B single-mode	Glass	Glass	Not applicable
IEC 60793-2-60	C single-mode	Glass	Glass	Not applicable
IEC 60793-2-70	D polarization-maintaining	Glass	Glass	Not applicable