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Optična vlakna - 2-50. del: Specifikacije izdelka - Področna specifikacija za enorodna vlakna razreda B

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

Lichtwellenleiter - Teil 2-50: Produktspezifikationen - Rahmenspezifikation für Einmodenfasern der Kategorie B

Fibres optiques - Partie 2-50: Spécifications de produits - Spécification intermédiaire pour les fibres unimodales de classe B

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NORME EUROPÉENNE
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EN 60793-2-50

July 2013

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Supersedes EN 60793-2-50:2008

English version

**Optical fibres -
Part 2-50: Product specifications -
Sectional specification for class B single-mode fibres
(IEC 60793-2-50:2012)**

Fibres optiques -
Partie 2-50: Spécifications de produits -
Spécification intermédiaire pour les fibres
unimodales de classe B
(CEI 60793-2-50:2012)

Lichtwellenleiter -
Teil 2-50: Produktspezifikationen -
Rahmenspezifikation für Einmodenfasern
der Kategorie B
(IEC 60793-2-50:2012)

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European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 86A/1481/FDIS, future edition 4 of IEC 60793-2-50, 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 60793-2-50:2013.

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) 2014-01-05
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-01-17

This document supersedes EN 60793-2-50:2008.

EN 60793-2-50:2013 includes the following significant technical changes with respect to EN 60793-2-50:2008:

- aligns the requirements with the relevant ITU-T Recommendations;
- adds another option to the list of alternative primary coating diameter constructions in Table 2 and subsequent family specifications; related modification of coating strip force in Tables 4 and 11;
- removes the jumper cut-off wavelength in Table 5;
- modifies B6 sub-categories;
- aligns B6-b MFD on B1.3 MFD.

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 60793-2-50:2012 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 60794-2	NOTE	Harmonised as EN 60794-2.
IEC 60794-3	NOTE	Harmonised as EN 60794-3.

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-1	Series	Optical fibres - Part 1: Measurement methods and test procedures	EN 60793-1	Series
IEC 60793-1-1	-	Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance	EN 60793-1-1	-
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 60793-1-31	-
IEC 60793-1-32	-	Optical fibres - Part 1-32: Measurement methods and test procedures - Coating strippability	EN 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 60793-1-34	-
IEC 60793-1-40	-	Optical fibres - Part 1-40: Measurement methods and test procedures - Attenuation	EN 60793-1-40	-
IEC 60793-1-42	-	Optical fibres - Part 1-42: Measurement methods and test procedures - Chromatic dispersion	EN 60793-1-42	-
IEC 60793-1-44	-	Optical fibres - Part 1-44: Measurement methods and test procedures - Cut-off wavelength	EN 60793-1-44	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-1-45	-	Optical fibres - Part 1-45: Measurement methods and test procedures - Mode field diameter	EN 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 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 60793-1-50	-	Optical fibres - Part 1-50: Measurement methods and test procedures - Damp heat (steady state)	EN 60793-1-50	-
IEC 60793-1-51	-	Optical fibres - Part 1-51: Measurement methods and test procedures - Dry heat	EN 60793-1-51	-
IEC 60793-1-52	-	Optical fibres - Part 1-52: Measurement methods and test procedures - Change of temperature	EN 60793-1-52	-
IEC 60793-1-53	-	Optical fibres - Part 1-53: Measurement methods and test procedures - Water immersion	EN 60793-1-53	-
IEC 60793-2	-	Optical fibres - Part 2: Product specifications - General	EN 60793-2	-

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IEC 60793-2-50

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Optical fibres – iTeh STANDARD PREVIEW
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Fibres optiques –
Partie 2-50: Spécifications de produits – Spécification intermédiaire pour les
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRES –

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

FOREWORD

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- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60793-2-50 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 2008, and constitutes a technical revision.

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

- aligns the requirements with the relevant ITU-T Recommendations;
- adds another option to the list of alternative primary coating diameter constructions in Table 2 and subsequent family specifications; related modification of coating strip force in Tables 4 and 11;
- removes the jumper cut-off wavelength in Table 5;
- modifies B6 sub-categories;

– aligns B6-b MFD on B1.3 MFD.

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

FDIS	Report on voting
86A/1481/FDIS	86A/1490/RVD

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

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

A list of all parts of the IEC 60793 series can be found, under the general title *Optical Fibres*, on the IEC website.

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

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

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OPTICAL FIBRES –

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

1 Scope

This part of IEC 60793 is applicable to optical fibre categories B1.1, B1.2, B1.3, B2, B4, B5 and B6. A map illustrating the connection of IEC designations to ITU-T designations is shown in Annex I. These fibres are used or can be incorporated in information transmission equipment and optical fibre cables.

Three types of requirements apply to these fibres:

- general requirements, as defined in IEC 60793-2;
- specific requirements common to the class B single-mode fibres covered in this standard and which are given in Clause 3;
- particular requirements applicable to individual fibre categories or specific applications, which are defined in Annexes A to G.

For some fibre categories (shown in the relevant family specifications), there are sub-categories that are distinguished on the basis of difference in transmission attribute specifications. The designations for these sub-categories are documented in the individual family specifications.

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2 Normative references

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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 60793-1 (all Parts 1), *Optical fibres – Measurement methods and test procedures*

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

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 60793-1-40:2011, *Optical fibres – Part 1-40: Measurement methods and test procedures – Attenuation*

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

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

IEC 60793-1-51, *Optical fibres – Part 1-51: Measurement methods and test procedures – Dry heat*

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

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

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

3 Terms and definitions

For the purposes of this document, a number of definitions apply. General definitions for fibres are provided in IEC 60793-2. The definitions of the specified attributes are contained in the relevant test methods standard of the IEC 60793-1 series, while general definitions for testing are provided in IEC 60793-1-1.

4 Abbreviations and symbols

The following abbreviations and symbols apply: