



INTERNATIONAL STANDARD



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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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CONTENTS

FOREWORD	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	8
4 Abbreviations and symbols	9
5 Specifications	9
5.1 General.....	9
5.2 Dimensional requirements.....	9
5.3 Mechanical requirements	10
5.4 Transmission requirements	11
5.5 Environmental requirements	12
5.5.1 General	12
5.5.2 Optical environmental requirements – Attenuation	13
5.5.3 Mechanical environmental requirements	13
Annex A (normative) Family specification for category B1.1 single-mode fibres	15
A.1 General.....	15
A.2 Dimensional requirements.....	15
A.3 Mechanical requirements	15
A.4 Transmission requirements	16
A.5 Environmental requirements	16
Annex B (normative) Family specification for category B1.2 single-mode fibres	17
B.1 General.....	17
B.2 Dimensional requirements.....	17
B.3 Mechanical requirements	17
B.4 Transmission requirements	18
B.5 Environmental requirements	18
Annex C (normative) Family specification for category B1.3 single-mode fibres	19
C.1 General.....	19
C.2 Dimensional requirements.....	19
C.3 Mechanical requirements	19
C.4 Transmission requirements	20
C.5 Hydrogen ageing for category B1.3.....	20
C.6 Environmental requirements	21
Annex D (normative) Family specification for category B2 single-mode fibres	22
D.1 General.....	22
D.2 Dimensional requirements.....	22
D.3 Mechanical requirements	22
D.4 Transmission requirements	23
D.4.1 General	23
D.4.2 Chromatic dispersion coefficient requirement for sub-category B2_a fibres	23
D.4.3 Chromatic dispersion coefficient requirement for sub-category B2_b fibres	24
D.5 Environmental requirements	24
Annex E (normative) Family specification for category B4 single-mode fibres	25
E.1 General.....	25

E.2	Dimensional requirements.....	25
E.3	Mechanical requirements	25
E.4	Transmission requirements	26
E.4.1	General	26
E.4.2	Chromatic dispersion coefficient limits for sub-category B4_c fibres	26
E.4.3	Chromatic dispersion coefficient limits for sub-category B4_d fibres	27
E.4.4	Chromatic dispersion coefficient limits for sub-category B4_e fibres	27
E.5	Environmental requirements	27
Annex F (normative)	Family specification for category B5 single-mode fibres.....	28
F.1	General.....	28
F.2	Dimensional requirements.....	28
F.3	Mechanical requirements	28
F.4	Transmission requirements	29
F.4.1	General	29
F.4.2	Chromatic dispersion coefficient for category B5 fibres.....	29
F.5	Environmental requirements	30
Annex G (normative)	Family specification for category B6 single-mode fibres	31
G.1	General.....	31
G.2	Dimensional requirements.....	31
G.3	Mechanical requirements	32
G.4	Transmission requirements	32
G.5	Environmental requirements	33
Annex H (informative)	System design information for category B4 single-mode fibres	34
H.1	General.....	34
H.2	One standard deviation limits for sub-category B4_d fibres	34
H.3	One standard deviation limits for sub-category B4_e fibres	35
Annex I (informative)	Map from IEC nomenclature to ITU-T recommendations	36
Bibliography.....		37
Figure H.1	– Sub-category B4_d chromatic dispersion coefficient limits	35
Figure H.2	– Sub-category B4_e chromatic dispersion coefficient limits	35
Table 1	– Dimensional attributes and measurement methods	9
Table 2	– Dimensional requirements common to all category B fibres	10
Table 3	– Mechanical attributes and test methods.....	10
Table 4	– Mechanical requirements common to all class B fibres	11
Table 5	– Transmission attributes and measurement methods	11
Table 6	– Transmission, requirements common to all class B fibres	12
Table 7	– Additional transmission attributes required in the family specifications	12
Table 8	– Environmental exposure tests	12
Table 9	– Attributes measured in environmental exposure tests	12
Table 10	– Change in attenuation for environmental tests.....	13
Table 11	– Coating strip force for environmental tests.....	13
Table 12	– Tensile strength for environmental tests	13
Table 13	– Stress corrosion susceptibility for environmental tests.....	14
Table A.1	– Dimensional requirements specific to category B1.1 fibres	15

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Table A.2 – Mechanical requirements specific to category B1.1 fibres	15
Table A.3 – Transmission requirements specific to category B1.1 fibres	16
Table B.1 – Dimensional requirements specific to category B1.2 fibres	17
Table B.2 – Mechanical requirements specific to category B1.2 fibres	18
Table B.3 – Transmission requirements specific to category B1.2 fibres	18
Table C.1 – Dimensional requirements specific to category B1.3 fibres	19
Table C.2 – Mechanical requirements specific to category B1.3 fibres	19
Table C.3 – Transmission requirements specific to category B1.3 fibres	20
Table D.1 – Dimensional requirements specific to category B2 fibres	22
Table D.2 – Mechanical requirements specific to category B2 fibres	23
Table D.3 – Transmission requirements specific to category B2 fibres	23
Table E.1 – Dimensional requirements specific to category B4 fibres	25
Table E.2 – Mechanical requirements specific to category B4 fibres	26
Table E.3 – Transmission requirements specific to category B4 fibres	26
Table F.1 – Dimensional requirements specific to category B5 fibres	28
Table F.2 – Mechanical requirements specific to category B5 fibres	29
Table F.3 – Transmission requirements specific to category B5 fibres	29
Table G.1 – Dimensional requirements specific to category B6 fibres	32
Table G.2 – Mechanical requirements specific to category B6 fibres	32
Table G.3 – Transmission requirements specific to category B6 fibres	33
Table H.1 – Examples for $\lambda_{\min} = 1\,530\text{ nm}$ and $\lambda_{\max} = 1\,565\text{ nm}$	34
Table I.1 – Map of IEC to ITU	36

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OPTICAL FIBRES –

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

FOREWORD

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International Standard IEC 60793-2-50 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This fifth edition cancels and replaces the fourth edition, published in 2012. This edition constitutes a technical revision.

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

- a) aligns the requirements with the ITU-T Recommendations G.654 (2012-10) and G.657 (2012-10);
- b) adds a new sub-category B1.2_d;
- c) modifies B6 sub-categories in terms of attenuation and chromatic dispersion coefficient.

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

CDV	Report on voting
86A/1571/CDV	86A/1614/RVC

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 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 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.

A bilingual version of this publication may be issued at a later date.

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OPTICAL FIBRES –

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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 5;
- 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.

2 Normative references

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), *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*

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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 60793-1-40:2001, *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) 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 60793-2, *Optical fibres – Part 2: Product specifications – General*

IEC 60794-3, *Optical fibre cables – Part 3: Outdoor cables – Sectional specification*

IEC TR 62316, *Guidance for the interpretation of OTDR backscattering traces*