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Title: BS EN IEC 60793-2-60 Optical fibres

Part 2-60: Product specifications - Sectional specification for categoryC single-mode interconnection fibres

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



86A/2356/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:
IEC 60793-2-60 ED2

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2023-06-30

CLOSING DATE FOR COMMENTS:
2023-09-22

SUPERSEDES DOCUMENTS:
86A/2333/RR

IEC SC 86A : FIBRES AND CABLES	
SECRETARIAT: France	SECRETARY: Mr Laurent Gasca
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY	

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TITLE:

Optical fibres - Part 2-60: Product specifications - Sectional specification for category C single-mode interconnection fibres

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INTERNATIONAL ELECTROTECHNICAL COMMISSION**OPTICAL FIBRES –****Part 2-60: Product specifications –
Sectional specification for category C
single-mode interconnection fibres****FOREWORD**

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IEC 60793-2-60 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics. It is an International Standard.

This second edition cancels and replaces the first edition published in 2008. This edition constitutes a technical revision.

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

- a) Replace 'intraconnection' by 'interconnection' and include definition of 'interconnection fibres';
- b) Modify nominal MFD limit of C1 fibres;
- c) Inclusion of limits of 'Primary coating diameter-colored' for class C fibres and change of 'Primary coating diameter-uncolored' limits of class C₈₀ fibres;

- d) Change of coating strip force limits for class C1, C2, and C3 fibres;
- e) Replace 'Fibre cut-off wavelength' by 'Cable cut-off wavelength' and revise 'Note b' in Table 6;
- f) Replace 'Fibre cut-off wavelength' by 'Cable cut-off wavelength' and delete the 'Note' in Table 8;
- g) Inclusion of 200 µm coating diameter requirements of C1_125 and change of coating diameters limits of C1_80 fibres in Table A.1;
- h) Inclusion of 200 µm coating diameter requirements of C1_125 fibre and change of coating strip force limits in Table A.2 and in Table A.5;
- i) Replace 'Fibre cut-off wavelength' by 'Cable cut-off wavelength', modify 'Cable cutoff wavelength' limit and include a new 'note' in Table A.3;
- j) Include transmission requirements at 1625 nm and delete 1310 nm for C1 fibres in Table A.4;
- k) Modify 'Fibre cut-off wavelength' limits of C3 fibres in Table C.3;
- l) Replace 'Fibre cut-off wavelength' by 'Cable cut-off wavelength' for C4 fibres in Table D.3.

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

Draft	Report on voting
XX/XX/FDIS	XX/XX/RVD

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/standardsdev/publications.

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 2-60: Product specifications – Sectional specification for category C single-mode interconnection fibres

1 Scope

This part of IEC 60793 is applicable to optical fibre types C1, C2, C3, C4, as described in Table 1. These fibres are used for the interconnections within or between optical components systems and are optimized to support next generation dense optical connectivity. While the fibres could be overcoated or buffered for the purpose of making protected pigtails, they may be used without overcoating. They may, however, be colour-coded.

The general requirements defined in IEC 60793-2 apply to these fibres. Specific requirements that are common to these fibres are found in the body of this text. Particular requirements for individual fibre types or applications are defined in Annexes A, B, C and D, which refer to normative family specifications. These family specifications are distinguished based on optimum transmission wavelengths and nominal Mode Field Diameter (MFD), which affects splice loss.

For each family specification, there are two sub-categories that are distinguished on the basis of the cladding diameter and other related attributes. The conventional nominal cladding diameter of 125 μm is augmented with the reduced cladding type product with a nominal diameter of 80 μm . These are distinguished with the suffixes: “_125” or “_80”. For example C1 fibre can be selected as C1_125 or C1_80. The transmission characteristics of both the cladding diameter choices should be the same.

For each family specification except C1, there are two sub-categories that are distinguished on the basis of transmission characteristics that relate to MFD. To denote these sub-categories, a “_a” or “_b” suffix is added, for lower or higher MFD. In general, the fibres can be optimised for either splice loss or macro-bend loss using MFD as a main variable. A C2 fibre with 80 μm cladding diameter and lower MFD is designated as C2_80_a.

Fibres for the C1_125 family specification can be selected from category B-652.B or B-652.D or B-657 single-mode fibres and are suitable for use with any category B single-mode fibre at wavelengths from 1 260 nm to 1 625 nm. Fibres for the C2 and C3 family specifications are optimized at nominal wavelengths of 1 310 nm and 1 550 nm respectively for connection to any category B single-mode fibre. Fibres for the C4 family specification are optimized for transporting optical amplifier pump light at 980 nm or higher.

Table 1 – List of families and main differences

Families	Nominal transmission wavelengths nm	Nominal MFDs
C1	1 260, 1 550 and 1 625	8,6 – 9,2 μm at 1 310 nm
C2	1 310	5,0 – 7,0 μm at 1 310 nm
C3	1 550 and 1 625	5,5 – 7,5 μm at 1 550 nm
C4	980	4,0 – 7,0 μm at 980 nm