

---

---

Optical fibres – Part 2-20: Product specifications – Sectional specification for category A2 multimode fibres (IEC 60793-2-20:2001)

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 60793-2-20:2004](https://standards.iteh.ai/catalog/standards/sist/74d87f3d-5021-4615-a9c0-ee5278d4ae7a/sist-en-60793-2-20-2004)  
<https://standards.iteh.ai/catalog/standards/sist/74d87f3d-5021-4615-a9c0-ee5278d4ae7a/sist-en-60793-2-20-2004>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 60793-2-20:2004

<https://standards.iteh.ai/catalog/standards/sist/74d87f3d-5021-4615-a9c0-ee5278d4ae7a/sist-en-60793-2-20-2004>

EUROPEAN STANDARD

**EN 60793-2-20**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2002

ICS 33.180.10

English version

**Optical fibres**  
**Part 2-20: Product specifications –**  
**Sectional specification for category A2 multimode fibres**  
(IEC 60793-2-20:2001)

Fibres optiques  
Part 2-20: Spécifications de produits -  
Spécification intermédiaire pour les fibres  
multimodales de catégorie A2  
(CEI 60793-2-20:2001)

Lichtwellenleiter  
Teil 2-20: Produktspezifikationen -  
Rahmenspezifikation für  
Mehrmodenfasern der Kategorie A2  
(IEC 60793-2-20:2001)

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

This European Standard was approved by CENELEC on 2002-03-05. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 86A/731/FDIS, future edition 1 of IEC 60793-2-20, prepared by SC 86A, Fibres and cables, of IEC TC 86, Fibre optics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60793-2-20 on 2002-03-05.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2002-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-03-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annexes A, B, C and ZA are normative.  
Annex ZA has been added by CENELEC.

Compared to IEC 60793-1:1989 and IEC 60793-2:1992, IEC/SC 86A has adopted a revised structure of the new IEC 60793 series: The individual measurement methods and test procedures for optical fibres are published as "Part 1-XX"; the product standards are published as "Part 2-XX".

The general relationship between the new series of EN 60793 and the superseded European Standards of the EN 188000 series is as follows:

EN	Title	supersedes
EN 60793-1-XX	Optical fibres -- Part 1-XX: Measurement methods and test procedures	Individual subclauses of EN 188000:1992
EN 60793-2-XX	Optical fibres -- Part 2-XX: Product specifications	EN 188100:1995 EN 188101:1995 EN 188102:1995 EN 188200:1995 EN 188201:1995 EN 188202:1995

## Endorsement notice

The text of the International Standard IEC 60793-2-20:2001 was approved by CENELEC as a European Standard without any modification.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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: Generic specification	EN 60793-1	Series
IEC 60793-1-20	2001	Part 1-20: Measurement methods and test procedures - Fibre geometry	EN 60793-1-20	2002
IEC 60793-1-21	2001	Part 1-21: Measurement methods and test procedures - Coating geometry	EN 60793-1-21	2002
IEC 60793-1-22	2001	Part 1-22: Measurement methods and test procedures - Length measurement	EN 60793-1-22	2002
IEC 60793-1-30	2001	Part 1-30: Measurement methods and test procedures - Fibre proof test	EN 60793-1-30	2002
IEC 60793-1-40	2001	Part 1-40: Measurement methods and test procedures - Attenuation	EN 60793-1-40	- <sup>1)</sup>
IEC 60793-1-41	2001	Part 1-41: Measurement methods and test procedures - Bandwidth	EN 60793-1-41	2002
IEC 60793-1-43	2001	Part 1-43: Measurement methods and test procedures - Numerical aperture	EN 60793-1-43	2002
IEC 60793-1-46	2001	Part 1-46: Measurement methods and test procedures - Monitoring of changes in optical transmittance	EN 60973-1-46	2002
IEC 60793-1-50	2001	Part 1-50: Measurement methods and test procedures - Damp heat (steady state)	EN 60793-1-50	2002
IEC 60793-1-51	2001	Part 1-51: Measurement methods and test procedures - Dry heat	EN 60793-1-51	2002
IEC 60793-1-52	2001	Part 1-52: Measurement methods and test procedures - Change of temperature	EN 60793-1-52	2002

<sup>1)</sup> To be published.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-1-53	2001	Part 1-53: Measurement methods and test procedures - Water immersion	EN 60793-1-53	2002
IEC 60793-2	- <sup>2)</sup>	Part 2: Product specifications - General	-	-
IEC/TR 62048	- <sup>1)</sup>	The law theory of optical fibre reliability	-	-

## **iTeh STANDARD PREVIEW** **(standards.iteh.ai)**

[SIST EN 60793-2-20:2004](https://standards.iteh.ai/catalog/standards/sist/74d87f3d-5021-4615-a9c0-ee5278d4ae7a/sist-en-60793-2-20-2004)

<https://standards.iteh.ai/catalog/standards/sist/74d87f3d-5021-4615-a9c0-ee5278d4ae7a/sist-en-60793-2-20-2004>

---

2) Under consideration.

NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD

CEI  
IEC

60793-2-20

Première édition  
First edition  
2001-12

---

---

Fibres optiques –

Partie 2-20:

Spécifications de produits –

Spécification intermédiaire pour les fibres  
multimodales de catégorie A2

(standards.iteh.ai)

Optical fibres –

<https://standards.iteh.ai/catalog/standards/sist/74d873d-5021-4615-a9c0-7e7a/sist-en-60793-2-20-2004>

Part 2-20:

Product specifications –

Sectional specification for category A2  
multimode fibres

© IEC 2001 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission  
Telefax: +41 22 919 0300

e-mail: [inmail@iec.ch](mailto:inmail@iec.ch)

3, rue de Varembé Geneva, Switzerland  
IEC web site <http://www.iec.ch>



Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

CODE PRIX  
PRICE CODE

L

For price, see current catalogue  
For price, see current catalogue

## CONTENTS

FOREWORD.....	5
1 Scope and object.....	9
2 Normative references .....	9
3 Specifications .....	11
3.1 Dimensional requirements .....	11
3.2 Mechanical requirements.....	13
3.3 Transmission requirements.....	13
3.4 Environmental requirements .....	15
Annex A (normative) Family specifications for A2a multimode fibres .....	17
Annex B (normative) Family specifications for A2b multimode fibres .....	19
Annex C (normative) Family specifications for A2c multimode fibres .....	21
Table 1 – Relevant dimensional attributes and measurement methods.....	11
Table 2 – Requirements common to category A2 fibres.....	13
Table 3 – Additional attributes required in the family specifications.....	13
Table 4 – Relevant mechanical attributes and test methods .....	13
Table 5 – Requirements common to category A2 fibres.....	13
Table 6 – Relevant transmission attributes and measurement methods.....	15
Table 7 – Requirements common to fibres of category A2.....	15
Table 8 – Relevant environmental attributes and test methods.....	15
Table A.1 – Dimensional requirements specific to A2a fibres .....	17
Table A.2 – Mechanical requirements specific to A2a fibres .....	17
Table A.3 – Transmission requirements specific to A2a fibres .....	17
Table B.1 – Dimensional requirements specific to A2b fibres .....	19
Table B.2 – Mechanical requirements specific to A2b fibres.....	19
Table B.3 – Transmission requirements specific to A2b fibres .....	19
Table C.1 – Dimensional requirements specific to A2c fibres .....	21
Table C.2 – Mechanical requirements specific to A2c fibres.....	21
Table C.3 – Transmission requirements specific to A2c fibres.....	21



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## OPTICAL FIBRES –

**Part 2-20: Product specifications –  
Sectional specification for category A2 multimode fibres**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60793-2-20 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This part 2-20 constitutes part of the IEC 60793-2 series, fifth edition. This series has been restructured and is composed of IEC 60793-2: Product specifications – General<sup>1</sup> as well as various parts IEC 60793-2-x, devoted to different types of fibres. The IEC 60793-2 series as a whole replaces the fourth edition of IEC 60793-2, published in 1998, of which it constitutes a technical revision.

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

FDIS	Report on voting
86A/731/FDIS	86A/753/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 3.

<sup>1</sup> Under consideration