IEC 60793-2-40

Edition 4.0 2015-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Optical fibres –
Part 2-40: Product specifications – Sectional specification for category A4 multimode fibres

Fibres optiques –
Partie 2-40: Spécifications de produits – Spécification intermédiaire pour les fibres multimodales de catégorie A4

IEC 60793-2-40:2015-11(en-fr)

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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CONTENTS

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OPTICAL FIBRES –

Part 2-40: Product specifications – Sectional specification for category A4 multimode fibres

FOREWORD

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International Standard IEC 60793-2-40 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 2009. This edition constitutes a technical revision.

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

a) harmonization of terminology within the IEC 60793-2 series;

b) added measurement parameters for numerical aperture and fibre geometry.

This bilingual version (2016-11) corresponds to the English version, published in 2015-11.

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

CDV	Report on voting
86A/1587/CDV	86A/1618/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.

The French version of this standard has not been voted upon.

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- withdrawn,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.

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OPTICAL FIBRES –

Part 2-40: Product specifications – Sectional specification for category A4 multimode fibres

1 Scope

This part of IEC 60793-2 is applicable to category A4 optical multimode fibres and the related sub-categories A4a, A4b, A4c, A4d, A4e, A4f, A4g and A4h. These fibres have a plastic core and plastic cladding and may have step-index, multi-step index or graded-index profiles. The fibres are used in information transmission equipment and other applications employing similar light transmitting techniques, and finally in fibre optic cables. Table 1 summarizes some of the salient characteristics and applications of these fibres.

Table 1 – Characteristics and applications of category A4 fibres

Sub-category	A4a	A4b	A4c	A4d	A4e	A4f	A4g	A4h
Core diameter (μm)	See Note 1	See Note 1	See Note 1	See Note 1	≥ 500	200	120	62,5
Cladding diameter (μm)	1 000	750	500	1 000	750	490	490	245
Numerical aperture Na_{ff}	0,50	0,50	0,50	0,30	0,25	0,190	0,190	0,190
Operating wave-length (s) (nm)	650 See Note 2	650	650	650	650	650 850 1 300	650 850 1 300	850 1 300
Applica-tions	Digital audio interface, automobile, industrial, sensor and data transmis-sion	Indus-trial and sen-sor	Sen-sor	Digital audiovisual interface and data transmission	Digital audiovisual interface and data transmission	Industrial and mobile; compatible with A3 transmission equipment	Data transmission	Data transmission; primarily used in ribbon structures
NOTE 1 Typically 15 μm to 35 μm smaller than the cladding diameter. NOTE 2 Other potential wavelengths for A4a fibre are described in Annex J.								

In addition to the applications shown in Table 1, other applications for A4 fibres include, but are not restricted to, the following: support for short reach, high bit-rate systems in telephony, distribution and local networks, carrying data, voice and/or video services and on-premises intrabuilding and interbuilding fibre installations, including LANs, PBXs, video, various multiplexing uses and miscellaneous related uses, such as consumer electronics and industrial and mobile networks.

Three types of requirements apply to A4 fibres:

- general requirements, as defined in IEC 60793-2;
- specific requirements common to category A4 multimode fibres covered in this standard and which are given in Clause 3;