

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Optical fibres –
Part 2-10: Product specifications – Sectional specification for category A1
multimode fibres**

**Fibres optiques –
Partie 2-10: Spécifications de produits – Spécification intermédiaire pour les
fibres multimodales de catégorie A1**



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Sectional specification for category A1 multimode fibres****FOREWORD**

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International Standard IEC 60793-2-10 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This seventh edition cancels and replaces the sixth edition published in 2017. This edition constitutes a technical revision.

This edition includes the following significant change with respect to the previous edition: revision of the naming convention for A1 multimode fibres, which better matches with those found in ISO/IEC standards. These changes are outlined in the scope of this document along with a cross reference table for the new names.

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

FDIS	Report on voting
86A/1932/FDIS	86A/1939/RVD

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

This document 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.

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OPTICAL FIBRES –

Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres

1 Scope

This part of IEC 60793 is applicable to optical fibre sub-categories A1-OM1, A1-OM2, A1-OM3, A1-OM4, A1-OM5, and A1d. These fibres are used or can be incorporated in information transmission equipment and optical fibre cables.

Sub-categories A1-OM2, A1-OM3, A1-OM4 and A1-OM5 apply to 50/125 μm graded index fibre in four bandwidth grades. Each of these bandwidth grades is defined for two levels of macrobend loss performance that are distinguished by "a" or "b" suffix. Those sub-categories with suffix "a" are specified to meet traditional macrobend loss performance levels. Those sub-categories with suffix "b" are specified to meet enhanced macrobend loss (i.e. lower loss) performance levels.

Sub-category A1-OM5 is specified to support single wavelength or multi-wavelength transmission systems in the vicinity of 850 nm to 950 nm. Although not normatively specified, bandwidth information covering this wavelength range is also included for A1-OM3 and A1-OM4.

Sub-category A1-OM1 applies to 62,5/125 μm graded index fibre and sub-category A1d applies to 100/140 μm graded index fibre.

Other applications include, but are not restricted to, the following: short reach, high bit-rate systems in telephony, distribution and local networks carrying data, voice and/or video services; on-premises intra-building and inter-building fibre installations including data centres, local area networks (LANs), storage area networks (SANs), private branch exchanges (PBXs), video, various multiplexing uses, outside telephone cable plant use, and miscellaneous related uses.

Three types of requirements apply to these fibres:

- general requirements, as defined in IEC 60793-2;
- specific requirements common to the category A1 multimode fibres covered in this document and which are given in Clause 5;
- particular requirements applicable to individual fibre sub-categories and models, or specific applications, which are defined in the normative specification Annexes A to D.

Table 1 shows the cross reference between the IEC A1 multimode optical fibre designations used in this document compared to those used in IEC 60793-2-10:2017. The table also refers to the normative annexes A, B and C for the A1 sub-category multimode fibres in this document that contains the detailed specification.