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Fibre optic interconnecting devices and passive components - Fibre optic connector optical interfaces for enhanced macrobend multimode fibres - Part 3-61: Connector parameters of physically contacting 50 μm core diameter fibres - Non-angled 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for reference connection applications

Dispositifs d'interconnexion et composants passifs fibroniques - Interfaces optiques des connecteurs fibroniques pour fibres multimodales améliorées en macrocourbures - Partie 3-61: Paramètres de connexion des fibres d'un diamètre de cœur de 50 μm en contact physique - Férules cylindriques non inclinées en zircone plein de 2,5 mm et 1,25 mm de diamètre, pour les applications de connexion de référence



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CONTENTS

FOREWORD.....	2
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions.....	4
4 Attenuation grade.....	5
5 Description.....	5
6 Criteria for a fit within the reference performance grade.....	6
6.1 Geometry of reference plug after termination.....	6
6.2 Use of selected fibre in reference-grade connectors.....	8
7 Reference adapter.....	9
Annex A (informative) Attenuation test limits of reference grade R_{m1} connectors to grade B_m connectors.....	10
A.1 General.....	10
A.2 Performance grade B_m test limit against R_{m1} reference connector.....	10
A.3 Calculated attenuation of random mated Grade R_{m1} reference connections.....	10
Annex B (normative) Maximum allowed spherical fibre undercut.....	12
Bibliography.....	14
Figure 1 – Geometrical requirements for fibre core location after termination relative to the ferrule axis and the connector plug key.....	6
Figure 2 – Interface dimensions for PC ferrule.....	7
Figure A.1 – Calculated attenuation of random mated Grade R_{m1} reference connectors.....	11
Figure B.1 – Allowable undercut as a function of endface radius and apex offset – 4,9 N minimum contact force.....	13
Figure B.2 – Allowable undercut as a function of end face radius and apex offset – 2,9 N minimum contact force.....	13
Table 1 – Multimode attenuation grade at 850 nm.....	5
Table 2 – Optical interface parameter values for 2,5 mm diameter PC ferrules for multimode reference connectors grade R_{m1}	8
Table 3 – Optical interface parameter values for 1,25 mm diameter PC ferrules for multimode reference connectors grade R_{m1}	8
Table A.1 – Performance grade test limits at 850 nm.....	10

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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IEC 63267-3-61 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

This is the first edition and the first edition of IEC 63267-2-2 cancel and replace the first edition of IEC 61755-6-2 published in 2018. This edition constitutes a technical revision. The document includes the following significant technical changes with respect to the previous edition:

- a) Definition of a reference grade, R_{m1} interface;
- b) Inclusion of A1-OM2b to A1-OM5b fibres;
- c) Updates to normative references;

- d) The addition of Annex A, which describes the attenuation test limits of reference grade R_{m1} connectors to grade B_m connectors;
- e) A new Annex B that describes the allowable fibre undercut.

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

Draft	Report on voting
86B/5030/FDIS	86B/5075/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.

A list of all parts in the IEC 63267-3-61 series, published under the general title *Fibre optic interconnecting devices and passive components – Fibre optic connector optical interfaces for enhanced macrobend multimode fibres*, can be found on the IEC website.

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/publications.

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- reconfirmed,
- withdrawn, or
- revised.

1 Scope

This part of the IEC 63267 series defines the dimensional limits of an optical interface for reference connectors with 2,5 mm or 1,25 mm diameter cylindrical zirconia (ZrO_2) ferrules necessary to meet specific requirements for fibre-to-fibre interconnection of non-angled polished multimode reference connections as defined in IEC 63267-2-2.

Ferrule dimensions and features are contained in the IEC 61754 series of fibre optic connector interface standards.

One grade of reference connector, R_{m1} , is defined in this document. The reference connector is terminated to restricted IEC 60793-2-10 using A1-OM2b to A1-OM5b fibre in 850 nm band only.

The geometrical dimensions and tolerances of the specified reference connector have been developed primarily to limit the variation in measured attenuation between multiple sets of reference connectors, and therefore to reduce the variation in measured attenuation between an arbitrarily chosen reference connector when mated with a connector in the field or factory.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60793-2-10, *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres*

IEC 61300-3-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-4: Examinations and measurements – Attenuation*

IEC 61300-3-42, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-42: Examinations and measurements – Attenuation of single mode alignment sleeves and or adapters with resilient alignment sleeves*

IEC 63267-1, *Fibre optic interconnecting devices and passive components – Fibre optic connector optical interfaces – Part 1: Enhanced macro bend loss multimode 50 μ m core diameter fibres – General and guidance*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 63267-1 apply.

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