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**Fibre optic interconnecting devices and passive components – Connector optical interfaces for enhanced macro bend multimode fibres –
Part 2-1: Connection parameters of physically contacting 50 µm core diameter fibres – Non-angled**

**Dispositifs d'interconnexion et composants passifs fibroniques – Interfaces optiques de connecteurs pour fibres multimodales améliorées en macrocourbures –
Partie 2-1 : Paramètres de connexion des fibres d'un diamètre de cœur de 50 µm en contact physique – Sans angle**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING
DEVICES AND PASSIVE COMPONENTS –
CONNECTOR OPTICAL INTERFACES FOR
ENHANCED MACRO BEND MULTIMODE FIBRES –****Part 2-1: Connection parameters of physically
contacting 50 µm core diameter fibres – Non-angled**

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IEC 63267-2-1 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.

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

| Draft | Report on voting |
|---------------|------------------|
| 86B/4858/FDIS | 86B/4877/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/publications.

A list of all parts of the IEC 63267 series, under the general title *Fibre optic interconnecting devices and passive components – Connector optical interfaces for enhanced macro bend multimode fibre*, can be found on the IEC website.

Future documents in this series will carry the new general title as cited above. Titles of existing documents in this series will be updated at the time of the next edition.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – CONNECTOR OPTICAL INTERFACES FOR ENHANCED MACRO BEND MULTIMODE FIBRES –

Part 2-1: Connection parameters of physically contacting 50 µm core diameter fibres – Non-angled

1 Scope

This part of IEC 63267 defines a set of specified conditions for an enhanced macro bend of 50/125 µm, graded index multimode fibre optic connection that is maintained in order to satisfy the requirements of attenuation and return loss performance in a randomly mated pair of polished physically contacting (PC) fibres.

An encircled flux (EF) compliant launch condition in accordance with IEC 61300-1, at an operational wavelength of 850 nm, is used for determination of performance grades, based on lateral fibre core offset, numerical aperture (NA) mismatch, and fibre core diameter (CD) variation. Fibre core angular offset is considered insignificant given the state-of-the-art and is excluded as a factor for attenuation estimation.

Attenuation and return loss performance grades are defined in IEC 63267-1.

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 61300-3-6, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-6: Examinations and measurements – Return loss*

IEC 61300-3-34, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-34: Examinations and measurements – Attenuation of random mated connectors*

IEC 61300-3-35, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-35: Examinations and measurements – Visual inspection of fibre optic connectors and fibre-stub transceivers*

IEC 61300-3-45, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-45: Examinations and measurements – Attenuation of random mated multi-fibre connectors*

IEC 63267-1, *Fibre optic interconnecting devices and passive components – Fibre optic connector optical interfaces – Part 1: Enhanced macro bend loss multimode 50 µm 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.