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INTERNATIONAL STANDARD

Fibre optic interconnecting devices and passive components – Connector optical interfaces –
Part 3-10: Connector parameters of non-dispersion shifted single mode physically contacting fibres – Non-angled ferrule-less, bore alignment connectors

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International Standard IEC 61755-3-10 has been prepared by sub-committee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

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

CDV	Report on voting
86B/3990A/CDV	86B/4032/RVC

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.

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1 Scope

This part of IEC 61755 defines certain dimensional limits of a 125 μm diameter single mode silica fibre optical interface and an alignment bore to meet specific requirements for non-angled fibre-to-fibre interconnection as defined in IEC 61755-2-1. The silica fibre materials specified in this document are suitable for use in categories C, U, E and O as defined in IEC 61753-1.

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 61753-1, *Fibre optic interconnecting devices and passive components – Part 1: General and guidance for performance standard*

IEC 61755-2-1:2006, *Fibre optic connector optical interfaces – Part 2-1: Optical interface standard single mode non-angled physical contacting fibres*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

4 Description

The performance of a ferrule-less optical interface is determined by the accuracy with which the optical datum targets of two mating fibres are aligned with each other. There are three conditions affecting the alignment of two optical datum targets: lateral offset, angular offset and longitudinal offset.

Parameters influencing the lateral and angular offset of the optical fibre axes of this interface include the following:

- fibre cladding diameter;
- alignment bore diameter;

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