



NSAI
Standards

Irish Standard
I.S. EN 61755-3-10:2017

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

I.S. EN 61755-3-10:2017

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National Foreword

I.S. EN 61755-3-10:2017 is the adopted Irish version of the European Document EN 61755-3-10:2017, 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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In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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EUROPEAN STANDARD

EN 61755-3-10

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2017

ICS 33.180.20

English Version

**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
(IEC 61755-3-10:2016)**

Dispositifs d'interconnexion et composants passifs
fibroniques - Interfaces optiques de connecteurs pour fibres
optiques - Partie 3-10: Paramètres des connecteurs pour
fibres unimodales à dispersion non décalée, en contact
physique - sans angle, sans ferrule, à alignement à alésage
(IEC 61755-3-10:2016)

Lichtwellenleiter - Verbindungselemente und passive
Bauteile - Optische Schnittstellen für Lichtwellenleiter-
Steckverbinder - Teil 3-10: Parameter von Steckverbindern
mit nicht-dispersionsverschobenen Einmodenfasern mit
physikalischem Kontakt - Nicht abgeschrägte
Steckverbinder ohne Ferrule mit Ausrichtungsbohrung
(IEC 61755-3-10:2016)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 61755-3-10:2017

European foreword

The text of document 86B/3990A/CDV, future edition 1 of IEC 61755-3-10, prepared by SC 86B "Fibre optic interconnecting devices and passive components" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61755-3-10:2017.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2017-10-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-01-12

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60793-2-50:2015	NOTE	Harmonized as EN 60793-2-50:2016 (not modified).
IEC 61754 Series	NOTE	Harmonized as EN 61754 Series.
IEC 61755-1	NOTE	Harmonized as EN 61755-1.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61753-1	-	Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standards	EN 61753-1	-
IEC 61755-2-1	2006	Fibre optic connector optical interfaces - Part 2-1: Optical interface standard single mode non-angled physically contacting fibres	EN 61755-2-1	2006

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IEC 61755-3-10

Edition 1.0 2016-12

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

**Fibre optic interconnecting devices and passive components – Connector optical interfaces –
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**

FOREWORD

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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.

A list of all parts in the IEC 61755 series, published under the general title *Fibre optic interconnecting devices and passive components – Connector optical interfaces*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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

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 physically 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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