

Fibre optic interconnecting devices and passive components - Connector optical interfaces for single-mode fibres - Part 2-1: Connection parameters of dispersion unshifted physically contacting fibres - Non-angled

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Fibre optic interconnecting devices and passive components -
Connector optical interfaces for single-mode fibres - Part 2-1:
Connection parameters of dispersion unshifted physically
contacting fibres - Non-angled
(IEC 61755-2-1:2022)

Dispositifs d'interconnexion et composants passifs
fibroniques - Interfaces optiques des connecteurs pour
fibres unimodales - Partie 2-1: Paramètres de connexion
des fibres en contact physique à dispersion non décalée -
Sans angle
(IEC 61755-2-1:2022)

Lichtwellenleiter-Verbindungselemente und passive
Bauteile - Optische Schnittstellen für Lichtwellenleiter-
Steckverbinder für Einmodenfasern - Teil 2-1:
Verbindungsparameter von nicht dispersionsverschobenen
Fasern mit physikalischem Kontakt - nicht angeschrägt
(IEC 61755-2-1:2022)

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European foreword

The text of document 86B/4629/FDIS, future edition 2 of IEC 61755-2-1, 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 IEC 61755-2-1:2022.

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) 2023-07-04
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IEC 61755-2-2 NOTE Harmonized as EN 61755-2-2

IEC 61755-3-1 NOTE Harmonized as EN 61755-3-1

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Fibre optic interconnecting devices and passive components – Connector optical interfaces for single-mode fibres –
Part 2-1: Connection parameters of dispersion unshifted physically contacting fibres – Non-angled**

**Dispositifs d'interconnexion et composants passifs fibroniques – Interfaces optiques des connecteurs pour fibres unimodales –
Partie 2-1: Paramètres de connexion des fibres en contact physique à dispersion non décalée – Sans angle**



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Part 2-1: Connection parameters of dispersion unshifted physically contacting
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non décalée – Sans angle**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES AND
PASSIVE COMPONENTS – CONNECTOR OPTICAL
INTERFACES FOR SINGLE-MODE FIBRES –****Part 2-1: Connection parameters of dispersion
unshifted physically contacting fibres – Non-angled**

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IEC 61755-2-1 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.

This second edition cancels and replaces the first edition published in 2006. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) addition of normative references and visual requirement tables;
- b) reconsideration of the whole parts of the text to avoid misuse of the standard.

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

Draft	Report on voting
86B/4629/FDIS	86B/4653/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/standardsdev/publications.

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 for single-mode fibres*, 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.

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – CONNECTOR OPTICAL INTERFACES FOR SINGLE-MODE FIBRES –

Part 2-1: Connection parameters of dispersion unshifted physically contacting fibres – Non-angled

1 Scope

This part of IEC 61755 defines a set of prescribed conditions for a single-mode fibre optic connection that is maintained in order to satisfy the requirements of attenuation and return loss (RL) performance in a randomly mated pair of non-angled polished physically contacting (PC) fibres. The model uses a Gaussian distribution of light intensity over the specified mode field diameter (MFD) for determination of attenuation performance grades, based on MFD mismatch and the amount of lateral and angular fibre core offsets. Attenuation and RL performance grades are defined in IEC 61755-1.

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 60793-2-50, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*

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 61755-1, *Fibre optic interconnecting devices and passive components – Connector optical interfaces for single-mode fibres – Part 1: Optical interfaces for dispersion unshifted fibres – General and guidance*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61755-1 and the following apply.