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I.S. EN 61755-2-4:2015

Fibre optic interconnecting devices and passive components - Connector optical interfaces - Part 2-4: Connection parameters of non-dispersion shifted single-mode physically contacting fibres - Non-angled for reference connection applications

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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 61755-2-4

February 2015

ICS 33.180.20

English Version

Fibre optic interconnecting devices and passive components - Connector optical interfaces - Part 2-4: Connection parameters of non-dispersion shifted single-mode physically contacting fibres - Non-angled for reference connection applications (IEC 61755-2-4:2015)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Interfaces optiques de connecteurs pour fibres optiques - Partie 2-4: Connexion de fibres unimodales à dispersion non décalée en contact physique sans angle, avec polissage, pour applications en tant que connecteurs de référence
(IEC 61755-2-4:2015)

Lichtwellenleiter - Verbindungselemente und passive Bauteile -Optische Schnittstellen von Lichtwellenleiter-Steckverbindern - Teil 2-4: Optische Schnittstelle von nicht-dispersionsverschobenen, nicht abgeschrägten Einmodenfasern mit physikalischem Kontakt für die Anwendung mit Referenzsteckverbindern
(IEC 61755-2-4:2015)

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Foreword

The text of document 86B/3845/FDIS, future edition 1 of IEC 61755-2-4, 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 61755-2-4:2015.

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)	2015-11-12
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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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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.

Publication	Year	Title	EN/HD	Year
IEC 60793-2-50	-	Optical fibres -- Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	-
IEC 61300-3-4	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 3-4: Examinations and measurements - Attenuation	EN 61300-3-4	-
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 adaptors with resilient alignment sleeves	EN 61300-3-42	-
IEC 61755-2-1	-	Fibre optic connector optical interfaces -- Part 2-1: Optical interface standard single mode non-angled physically contacting fibres	EN 61755-2-1	-
IEC 61755-2-2	-	Fibre optic connector optical interfaces -- Part 2-2: Optical interface standard single mode 8 degrees angled physically contacting fibres	EN 61755-2-2	-
IEC 61755-3 (mod)	series	Fibre optic connector optical interfaces	EN 61755-3	series
IEC/TR 62627-04	-	Fibre optic interconnecting devices and passive components - Part 04: Example of uncertainty calculation: Measurement of the attenuation of an optical connector	-	-

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IEC 61755-2-4

Edition 1.0 2015-01

INTERNATIONAL STANDARD

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Fibre optic interconnecting devices and passive components – Connector optical interfaces –
Part 2-4: Connection parameters of non-dispersion shifted single-mode physically contacting fibres – Non-angled for reference connection applications

IEC 61755-2-4:2015-01(en)

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INTERNATIONAL STANDARD

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Fibre optic interconnecting devices and passive components – Connector optical interfaces –
Part 2-4: Connection parameters of non-dispersion shifted single-mode physically contacting fibres – Non-angled for reference connection applications

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – CONNECTOR OPTICAL INTERFACES –

Part 2-4: Connection parameters of non-dispersion shifted single-mode physically contacting fibres – Non-angled for reference connection applications

FOREWORD

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International Standard IEC 61755-2-4 has been prepared by subcommittee 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:

FDIS	Report on voting
86B/3845/FDIS	86B/3866/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

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This publication 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.

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

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- reconfirmed,
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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – CONNECTOR OPTICAL INTERFACES –

Part 2-4: Connection parameters of non-dispersion shifted single-mode physically contacting fibres – Non-angled for reference connection applications

1 Scope

This part of IEC 61755 defines a set of prescribed conditions that should be maintained in order to satisfy the requirements of non-angled polished reference connections.

The prescribed conditions include dimensional limits and optical fibre requirements of the optical interface to meet specific requirements for reference connection (plugs and adaptors) used for attenuation measurements.

Two different grades for reference connections are defined in this standard. The use of each of these grades depends on the application and on the targeted attenuation measurement uncertainty. The model uses a Gaussian distribution of light intensity over the specified restricted mode field diameter (MFD) range.

This standard is intended to be used for shipping and acceptance inspections.

The reference connector plug is specified for B1.1, B1.3 and B6 fibres as specified in IEC 60793-2-50.

The use of the reference connector plug would not be recommended where classification of fibre is difficult, for example construction and maintenance of cable plant.

2 Normative references

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.

IEC 60793-2-50, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode 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 adaptors with resilient alignment sleeves*

IEC 61755-2-1, *Fibre optic interconnecting devices and passive components –Connector optical interfaces – Part 2-1: Connection parameters of non-dispersion shifted single-mode physically contacting fibres – Non-angled*

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