

Fibre optic interconnecting devices and passive components performance standard -- Part 021-2: Grade C/3 single-mode fibre optic connectors for category C - Controlled environment

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 61753-021-2:2008 sisaldab Euroopa standardi EN 61753-021-2:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 28.04.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 14.03.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 61753-021-2:2008 consists of the English text of the European standard EN 61753-021-2:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 28.04.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 14.03.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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Võtmesõnad: electronic equ, fiber, glass fibre cables, inside diameters, management, measurement, measuring techniques, monomode fibres, open air, optical fibres, optical waveguides, outside diameters, passive, performance, specification (approval), specifications, testing

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Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
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**Fibre optic interconnecting devices
and passive components performance standard -
Part 021-2: Grade C/3 single-mode fibre optic connectors
for category C -
Controlled environment
(IEC 61753-021-2:2007)**

Norme de qualité de fonctionnement
des dispositifs d'interconnexion
et composants passifs à fibres optiques -
Partie 021-2: Connecteurs à fibres
optiques unimodales de classe C/3
pour la catégorie C -
Environnement contrôlé
(CEI 61753-021-2:2007)

Lichtwellenleiter -
Verbindungselemente
und passive Bauteile -
Betriebsverhalten -
Teil 021-2: Lichtwellenleiter-
Steckverbinder der Stufe C/3
für Einmodenfasern für die Kategorie C -
Kontrollierte Umgebung
(IEC 61753-021-2:2007)

This European Standard was approved by CENELEC on 2008-03-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 86B/2602/FDIS, future edition 2 of IEC 61753-021-2, 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 was approved by CENELEC as EN 61753-021-2 on 2008-03-01.

This European Standard supersedes EN 61753-021-2:2002.

EN 61753-021-2:2008 has been updated to reflect changes made to EN 61753-1:2007.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2008-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2011-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61753-021-2:2007 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-2-50	- ¹⁾	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50 + corr. July	2004 ²⁾ 2004
IEC 61300-2-1	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal)	EN 61300-2-1	2003 ²⁾
IEC 61300-2-2	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-2: Tests - Mating durability	EN 61300-2-2	2003 ²⁾
IEC 61300-2-4	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests - Fibre/cable retention	EN 61300-2-4	1997 ²⁾
IEC 61300-2-6	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-6: Tests - Tensile strength of coupling mechanism	EN 61300-2-6	1997 ²⁾
IEC 61300-2-12	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-12: Tests - Impact	EN 61300-2-12	2005 ²⁾
IEC 61300-2-17	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-17: Tests - Cold	EN 61300-2-17	2003 ²⁾
IEC 61300-2-18	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-18: Tests - Dry heat - High temperature endurance	EN 61300-2-18	2005 ²⁾
IEC 61300-2-19	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-19: Tests - Damp heat (steady state)	EN 61300-2-19	2005 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61300-2-22	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-22: Tests - Change of temperature	EN 61300-2-22	2007 ²⁾
IEC 61300-2-42	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-42: Tests - Static side load for connectors	EN 61300-2-42	2005 ²⁾
IEC 61300-2-44	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-44: Tests - Flexing of the strain relief of fibre optic devices	EN 61300-2-44	2005 ²⁾
IEC 61300-3-1	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-1: Examinations and measurements - Visual examination	EN 61300-3-1	2005 ²⁾
IEC 61300-3-3	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-3: Examinations and measurements - Active monitoring of changes in attenuation and return loss	EN 61300-3-3	2003 ²⁾
IEC 61300-3-4	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-4: Examinations and measurements - Attenuation	EN 61300-3-4	2001 ²⁾
IEC 61300-3-6	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss	EN 61300-3-6	2003 ²⁾
IEC 61300-3-28	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss	EN 61300-3-28	2002 ²⁾
IEC 61300-3-34	- ¹⁾	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-34: Examinations and measurements - Attenuation of random mated connectors	EN 61300-3-34	2002 ²⁾
IEC 61753-1	2007	Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standards	EN 61753-1	2007
IEC 61754 (mod)	Series	Fibre optic connector interfaces	EN 61754	Series
IEC 61755 (mod)	Series	Fibre optic connector optical interfaces	EN 61755	Series
IEC 61755-3 (mod)	Series	Fibre optic connector optical interfaces - Part 3: Optical interface	EN 61755-3	Series

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO/IEC 11801	- ¹⁾	Information technology - Generic cabling for customer premises	-	-

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CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references	5
3 Terms and definitions	6
4 Tests	7
5 Test report.....	7
6 Reference components.....	8
7 Performance requirements	8
7.1 Dimensions.....	8
7.2 Sample size, test sequencing and grouping.....	8
7.3 Endface geometry	8
7.4 Performance criteria.....	8
7.5 Performance details	8
Annex A (normative) Sample size, test sequencing and grouping requirements	14
Figure 1 – Pigtail assembly.....	7
Figure 2 – Jumper cable assembly.....	7
Table 1 – Performance levels	8
Table 2 – Performance details	9
Table A.1 – Sample size, test sequencing and grouping requirements	14

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS PERFORMANCE STANDARD –

Part 021-2: Grade C/3 single-mode fibre optic connectors for category C – Controlled environment

1 Scope

This part of IEC 61753 defines C/3 minimum initial test and measurement requirements and severities which a single-mode connector/cable assembly must satisfy in order to be categorized as meeting the IEC standard category C (controlled environment), as defined in Clause A.2 of IEC 61753-1.

2 Normative references

The following referenced documents are indispensable for the application 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 61300-2-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-1: Tests – Vibration (sinusoidal)*

IEC 61300-2-2, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-2: Tests – Mating durability*

IEC 61300-2-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-4: Tests – Fibre/cable retention*

IEC 61300-2-6, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-6: Tests – Tensile strength of coupling mechanism*

IEC 61300-2-12, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-12: Tests – Impact*

IEC 61300-2-17, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-17: Tests – Cold*

IEC 61300-2-18, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-18: Tests – Dry heat – High temperature endurance*

IEC 61300-2-19, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-19: Tests – Damp heat (steady state)*

IEC 61300-2-22, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-22: Tests – Change of temperature*

IEC 61300-2-42, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-42: Tests – Static side load for connectors*

IEC 61300-2-44, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-44: Tests – Flexing of the strain relief of fibre optic devices*

IEC 61300-3-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-1: Examinations and measurements – Visual examination*

IEC 61300-3-3, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-3: Examinations and measurements – Active monitoring of changes in attenuation and return loss*

IEC 61300-3-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-4: Examinations and measurements – Attenuation*

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

IEC 61300-3-28, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-28: Examinations and measurements – Transient 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 61753-1:2007 *Fibre optic interconnecting devices and passive components performance standard – Part 1: General and guidance for performance standards*

IEC 61754 (all parts), *Fibre optic connector interfaces*

IEC 61755 (all parts), *Fibre optic connector optical interfaces*

IEC 61755-3 (all parts) *Fibre optic connector optical interfaces – Part 3: Optical interface*

ISO 11801, *Information technology – Generic cabling for customer premises*

3 Terms and definitions

For the purposes of this document, the following definitions apply.

3.1

change in attenuation

peak-to-peak variation

3.2

sample

complete set of connector components required to provide demountable coupling between one or more pairs of optical fibres

3.3

pigtail assembly

two connector plugs mated with an adapter with unterminated leads, as shown in Figure 1.

NOTE Each of the unterminated leads should be at least 3 m long so that the splices may be located outside of the environmental test chamber.