

Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications -- Part 10-1: Type MU-PC simplex terminated on IEC 60793-2-50 category B1.1 and B1.3 singlemode fibre, with full zirconia ferrule category C

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50377-10-1:2007 sisaldab Euroopa standardi EN 50377-10-1:2007 ingliskeelset teksti. Käesolev dokument on jõustatud 23.11.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 50377-10-1:2007 consists of the English text of the European standard EN 50377-10-1:2007. This document is endorsed on 23.11.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: This standard contains the initial, start of life dimensional, optical, mechanical and environmental performance requirements which a terminated and assembled single mode resilient alignment sleeve MU-PC simplex connector set (plug adaptor plug), adaptor and patch cord must meet in order for it to be categorised as an EN standard product.	Scope: This standard contains the initial, start of life dimensional, optical, mechanical and environmental performance requirements which a terminated and assembled single mode resilient alignment sleeve MU-PC simplex connector set (plug adaptor plug), adaptor and patch cord must meet in order for it to be categorised as an EN standard product.
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ICS 33.180.20

Võtmesõnad:

**Connector sets and interconnect components
to be used in optical fibre communication systems -
Product specifications -
Part 10-1: Type MU-PC simplex terminated
on IEC 60793-2-50 category B1.1 and B1.3 singlemode fibre,
with full zirconia ferrule category C**

Jeux de connecteurs et composants
d'interconnexion à utiliser
dans les systèmes de communication
par fibres optiques -
Spécifications de produit -
Partie 10-1: Type MU-PC simplex câblé
sur une fibre unimodale des catégories
B1.1 et B1.3 de la CEI 60793-2-50,
avec ferrule tout zircon, catégorie C

Steckverbindersätze
und Verbindungselemente
für Lichtwellenleiter-
Datenübertragungssysteme -
Produktnormen -
Teil 10-1: Bauart MU-PC-Simplex zum
Anschluss an Einmodenfasern der Typen
B1.1 und B1.3 nach IEC 60793-2-50
mit Zirkonium-Stift für die Kategorie C

This European Standard was approved by CENELEC on 2007-04-01. 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.

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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

This European Standard was prepared by the Technical Committee CENELEC TC 86BXA, Fibre optic interconnect, passive and connectorised components.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50377-10-1 on 2007-04-01.

This European Standard supersedes EN 50377-10-1:2003.

This document is updated to include the performance of the adaptor, and patch cord next to the pigtailed connector as defined in the previous version. It also includes latest attenuation and return loss grades as specified in IEC.

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) 2008-04-01
 - latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-04-01
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Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications

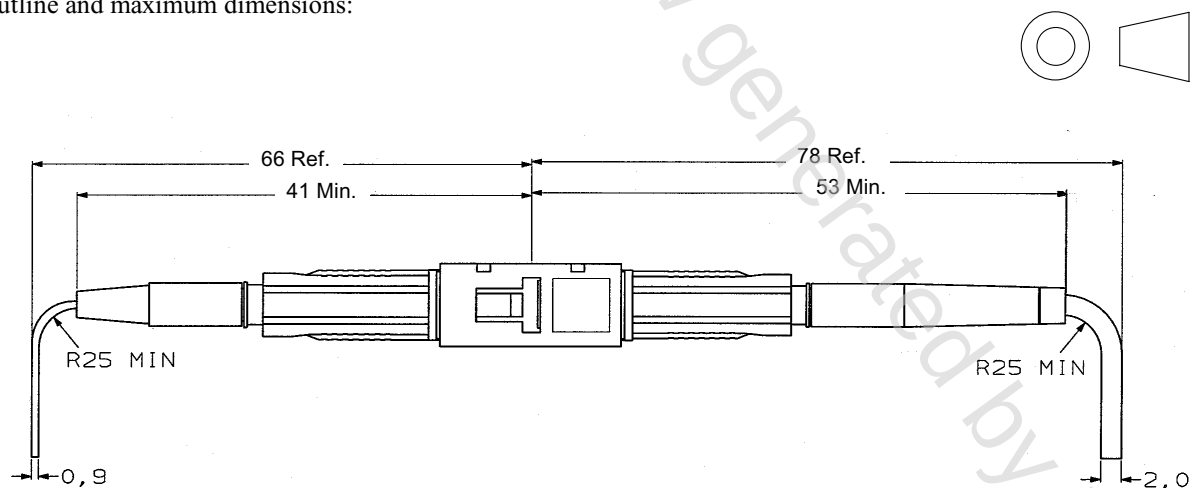
Part 10-1: Type MU-PC simplex terminated on IEC 60793-2-50 category B1.1 and B1.3 singlemode fibre, with full zirconia ferrule category C

Description		Performance	
Coupling mechanism:	Push-pull	Application:	For use in IEC category C (controlled environment)
Configuration:	Plug/adaptor/plug	Attenuation grades: (random mate)	B: $\leq 0,12$ dB mean $\leq 0,25$ dB for ≥ 97 % of measurements
Fibre category:	IEC 60793-2-50 Types B1.1 and B1.3		C: $\leq 0,25$ dB mean $\leq 0,50$ dB for ≥ 97 % of measurements
Cable type	See Table 3	Return loss grade:	2: ≥ 45 dB

Related documents:

EN 60794-2	Optical fibre cables - Part 2: Indoor cables - Sectional specification (IEC 60794-2)
EN 61300 series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures (IEC 61300 series)
EN 61753-1	Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standards (IEC 61753-1)
EN 61754-6	Fibre optic connector interfaces - Part 6: Type MU connector family (IEC 61754-6)
EN 61755-1	Fibre optic connector optical interfaces - Part 1: Optical interfaces for single mode non-dispersion shifted fibres - General and guidance (IEC 61755-1)
EN 61755-3-1 ¹⁾	Fibre optic connector optical interfaces - Part 3-1: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia PC ferrule, single mode fibre (IEC 61755-3-1, mod.)

Outline and maximum dimensions:



¹⁾ At draft stage.

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1 Scope

1.1 Product definition

This standard contains the initial, start of life dimensional, optical, mechanical and environmental performance requirements which a terminated and assembled single mode resilient alignment sleeve MU-PC simplex connector set (plug/adaptor/plug), adaptor and patchcord must meet in order for it to be categorised as an EN standard product.

Since different variants and grades of performance are permitted, product marking details are given in 3.5.

1.2 Interchangeability

Although all products conforming to the requirements of this standard will intermate, the resulting level of random attenuation performance will only be ensured in accordance with Table 1. The intention is that this will be true irrespective of the manufacturing source(s) of the product.

When intermating plug variants having different attenuation grades, the resulting level of attenuation can not be assured to be any better than the worst attenuation grade.

The intermating of a grade C plug with a grade B plug will result in an uncertain level of random attenuation performance.

Table 1 - Ensured level of random attenuation

Plug variant/Attenuation grade	C	B
C	C	C
B	C	B

1.3 Operating environment

The tests selected combined with the severities and durations are representative of a category C environment as defined in EN 61753-1.

1.4 Reliability

Whilst the anticipated service life expectancy of the product in this environment is 20 years, compliance with this standard does not guarantee the reliability of the product. This should be predicted using a recognised reliability assessment programme.

1.5 Quality assurance

Compliance with this standard does not guarantee the manufacturing consistency of the product. This should be maintained using a recognised quality assurance programme.

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.

EN 61300-2-1	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal) (IEC 61300-2-1)
EN 61300-2-2	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-2: Tests - Mating durability (IEC 61300-2-2)
EN 61300-2-4	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests - Fibre/cable retention (IEC 61300-2-4)
EN 61300-2-5	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-5: Tests - Torsion/twist (IEC 61300-2-5)
EN 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 61300-2-6)
EN 61300-2-12	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-12: Tests - Impact (IEC 61300-2-12)
EN 61300-2-17	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-17: Tests - Cold (IEC 61300-2-17)
EN 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 61300-2-18)
EN 61300-2-19	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-19: Tests - Damp heat (steady state) (IEC 61300-2-19)
EN 61300-2-22	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-22: Tests - Change of temperature (IEC 61300-2-22)
EN 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 61300-2-42)
EN 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 61300-2-44)
EN 61300-3-4	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-4: Examinations and measurements – Attenuation (IEC 61300-3-4)
EN 61300-3-6	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss (IEC 61300-3-6)
EN 61300-3-10	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-10: Examinations and measurements - Gauge retention force (IEC 61300-3-10)
EN 61300-3-15	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-15: Examinations and measurements - Eccentricity of a convex polished ferrule end face (IEC 61300-3-15)
EN 61300-3-16	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-16: Examinations and measurements – End face radius of spherically polished ferrules (IEC 61300-3-16)
EN 61300-3-23	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-23: Examinations and measurements - Fibre position relative to ferrule end face (IEC 61300-3-23)
EN 61300-3-28	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss (IEC 61300-3-28)
EN 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 61300-3-34)
EN 61300-3-42 ¹⁾	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 61300-3-42) ¹⁾
EN 61753-1	Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standards (IEC 61753-1)

¹⁾ At draft stage.