SLOVENSKI STANDARD
SIST EN 61755-3-2:2009

01-maj-2009

Optiļ ni vmesniki konektorja optiļ nih vlaken - 3-2. del: Optiļ ni vmesnik, cilindriļ ne tulke iz polnega cirkonija s premeroma 2,5 mm in 1,5 mm za PC enorodna optiļ na vlakna za spajanje pod kotom 8 stopinj (IEC 61755-3-2:2006 (MOD) + corrigendum Jan. 2009)

Fibre optic connector optical interfaces - Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres (IEC 61755-3-2:2006 (MOD) + corrigendum Jan. 2009)

Optische Schnittstellen für Lichtwellenleiter-Steckverbinder - Teil 3-2: Optische Schnittstellen von Zirkonium-Stiften mit 2,5 mm und 1,25 mm Durchmesser für 8° angeschrägte Einmodenfasern mit physikalischem Kontakt (IEC 61755-3-2:2006 (MOD) + corrigendum Jan. 2009)

Interfaces optiques de connecteurs pour fibres optiques - Partie 3-2: Interfaces optiques, férules PC en zircone plein cylindrique de diamètre 2,5 mm et 1,25 mm, pour fibres unimodales à angle PC de 8 degrés (CEI 61755-3-2:2006 (MOD) + corrigendum Jan. 2009)

Ta slovenski standard je istoveten z: **EN 61755-3-2:2009**

ICS:

33.180.20	Povezovalne naprave za optiļ na vlakna	Fibre optic interconnecting devices

SIST EN 61755-3-2:2009 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61755-3-2

February 2009

ICS 33.180.20

English version

Fibre optic connector optical interfaces - Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres

(IEC 61755-3-2:2006, modified + corrigendum 2009)

Interfaces optiques de connecteurs pour fibres optiques - Partie 3-2: Interfaces optiques, férules PC en zircone plein cylindrique de diamètre 2,5 mm et 1,25 mm, pour fibres unimodales à angle PC de 8 degrés (CEI 61755-3-2:2006, modifiée + corrigendum 2009)

Optische Schnittstellen für Lichtwellenleiter-Steckverbinder - Teil 3-2:Optische Schnittstellen mit 8° abgeschrägten Zirkonium-Ferrulen mit 2,5 mm und 1,25 mm Durchmesser für Einmodenfasern mit physikalischem Kontakt (IEC 61755-3-2:2006, modifiziert + Corrigendum 2009)

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CENELEC

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

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

Foreword

The text of the International Standard IEC 61755-3-2:2006, prepared by SC 86B, Fibre optic interconnecting devices and passive components, of IEC TC 86, Fibre optics, together with the common modifications prepared by the Technical Committee CENELEC TC 86BXA, Fibre optic interconnect, passive and connectorised components, was submitted to the formal vote and was approved by CENELEC as EN 61755-3-2 on 2008-12-01.

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)	2009-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2011-12-01

Endorsement notice

The text of the International Standard IEC 61755-3-2:2006 + corrigendum January 2009 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Table 1 – Optical interface parameter values for 2,5 mm diameter ferrule

In row C, **replace** the 3 maximum values ‘70’ with ‘50’ (µm).

Table 2 – Optical interface parameter values for 1,25 mm diameter ferrule

In row C, **replace** the 3 maximum values ‘70’ with ‘50’ (µm).

Bibliography

The following notes have to be added for the standards indicated:

IEC 61753-1	NOTE	Harmonized as EN 61753-1:2007 (not modified).
IEC 61755-2-2	NOTE	Harmonized as EN 61755-2-2:2006 (not modified).

NORME INTERNATIONALE

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Interfaces optiques de connecteurs pour fibres optiques –

Partie 3-2: Interfaces optiques, férules PC en zircone plein cylindrique de diamètre 2,5 mm et 1,25 mm, pour fibres unimodales à angle PC de 8 degrés

Fibre optic connector optical interfaces –

Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC CONNECTOR OPTICAL INTERFACES –

Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres

FOREWORD

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International Standard IEC 61755-3-2 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/2307/FDIS	86B/2361/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.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of IEC 61755 series, under the general title *Fibre optic connector optical interfaces*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

FIBRE OPTIC CONNECTOR OPTICAL INTERFACES –

Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres

1 Scope

This part of IEC 61755 defines certain dimensional limits of a 2,5 mm and a 1,25mm diameter cylindrical zirconia (ZrO_2) 8 degrees angled-PC (APC) ferrule optical interface to meet specific requirements for connecting fibre to fibre interconnection. Ferrules made from the material specified in this document are suitable for use in categories C, U, E and O as defined in IEC 61753-1.

2 Description

The performance of an angled-PC polished cylindrical ferrule optical interface is determined by the accuracy with which the optical datum targets of two mating ferrules 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 include the following:

- ferrule outside diameter;
- fibre hole concentricity relative to the ferrule outside diameter;
- fibre hole angle relative to outside diameter axis;
- fibre cladding diameter relative to fibre hole clearance;
- alignment sleeve inside diameter;
- fibre core concentricity relative to the cladding diameter;
- fibre core orientation relative to keying;
- ferrule grasping force of the alignment sleeve;
- the amount of angled PC polishing after tuning of the connector at PC condition.

Parameters influencing the axial alignment of the optical fibre axes include the following:

- end-face spherical radius;
- end-face spherical radius apex offset of ferrule or angle relative to angle-PC reference plane;
- fibre undercut;
- ferrule rotational clearance relative to the keying;
- axial force on ferrule end-face;
- ferrule and fibre material physical constants;
- alignment sleeve frictional force;
- keying accuracy.

3 Interface parameters

The optical interface dimensions are shown in Figure 1, the ferrule dimensions in Figure 3, while Figure 2 underlines fibre core location.

The parameter values are detailed in Tables 1, 2 and 3.

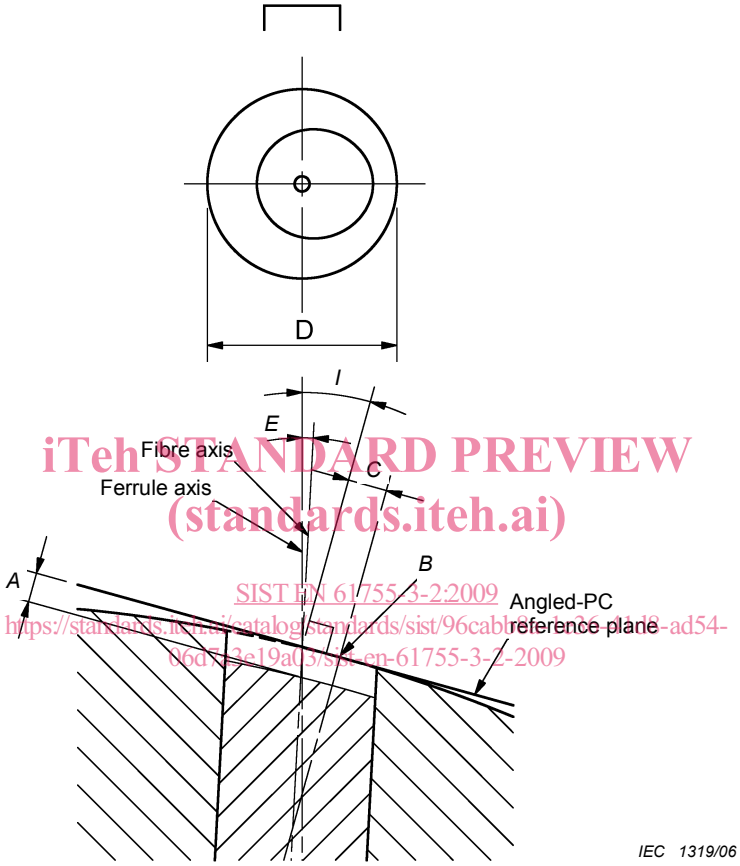

Figure 1 – Interface dimensions