SLOVENSKI STANDARD

SIST EN 61300-3-37:2006

marec 2006

Naprave za medsebojno povezovanje optičnih kablov in pasivne komponente – Osnovni preskusni in merilni postopki – 3-37. del: Pregledi in meritve – Kot poliranja konca kotno poliranih optičnih vlaken (IEC 61300-3-37:2005)

Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-37: Examinations and measurements - Endface angle of angle-polished optical fibres (IEC 61300-3-37:2005)

ICS 33.180.20

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EUROPEAN STANDARD **EN 61300-3-37**

NORME EUROPÉENNE

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ICS 33.180.20

English version

Fibre optic interconnecting devices and passive components – Basic test and measurement procedures Part 3-37: Examinations and measurements – Endface angle of angle-polished optical fibres

(IEC 61300-3-37:2005)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Méthodes fondamentales d'essais et de mesures
Partie 3-37: Examens et mesures – Angle d'extrémité des fibres optiques à polissage d'angle
(CEI 61300-3-37:2005)

Lichtwellenleiter - Verbindungselemente und passive Bauteile – Grundlegende Prüf- und Messverfahren
Teil 3-37: Untersuchungen und Messungen – Endflächenwinkel schräg polierter optischer Fasern
(IEC 61300-3-37:2005)

This European Standard was approved by CENELEC on 2005-06-01. 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.

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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

Ref. No. EN 61300-3-37:2005 E

Foreword

The text of document 86B/2106/FDIS, future edition 1 of IEC 61300-3-37, 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 61300-3-37 on 2005-06-01.

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)	2006-04-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2008-06-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61300-3-37:2005 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61300-1	NOTE	Harmonized as EN 61300-1:2003 (not modified).

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

Publication	Year	Title	EN/HD	Year
IEC 61300-3-17	- [1)]	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures Part 3-17: Examinations and measurements - Endface angle of angle-polished ferrules	EN 61300-3-17	1999 [2)]
IEC 61754-19	- [1)]	Fibre optic connector interfaces Part 19: Type SG connector family	EN 61754-19	2002 [2)]
ISO 2538	- [1)]	Geometrical Product Specifications (GPS) - Series of angles and slopes on prisms	EN ISO 2538	2003 [2)]

1) Undated reference.

2) Valid edition at date of issue.

NORME INTERNATIONALE

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61300-3-37

Première édition
First edition
2005-06

Dispositifs d'interconnexion et composants passifs à fibres optiques – Méthodes fondamentales d'essais et de mesures –

Partie 3-37: Examens et mesures – Angle d'extrémité des fibres optiques à polissage d'angle

Fibre optic interconnecting devices and passive components – Basic test and measurement procedures –

Part 3-37: Examinations and measurements – Endface angle of angle-polished optical fibres

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –

Part 3-37: Examinations and measurements – Endface angle of angle-polished optical fibres

FOREWORD

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International Standard IEC 61300-3-37 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/2106/FDIS	86B/2132/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.

IEC 61300 consists of the following parts, under the general title *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures:*

Part 1: General and guidance

Part 2: Tests

Part 3: Examinations and measurements

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 INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – BASIC TEST AND MEASUREMENT PROCEDURES –

Part 3-37: Examinations and measurements – Endface angle of angle-polished optical fibres

1 Scope

This part of IEC 61300 describes methods to measure the endface angle of flat or convex angle-polished optical fibres. The primary attributes addressed include endface angle, key angle and radius of curvature.

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 61300-3-17, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-17: Examination and measurements – Endface angle of angle-polished ferrules*

IEC 61754-19, *Fibre optic connector interfaces – Part 19: Type SG connector family*

ISO 2538, *Geometrical Product Specifications (GPS) – Series of angles and slopes on prisms*

3 General description

Optical fibres are frequently cleaved and polished to achieve a suitable endface surface topography for interfacing to other fibres, optical components, transmitters or receivers. Such interfaces may occur in free space or by physical contact. Often, particularly in the case of ferrule-less fibre optic connectors, radiused or angled radiused endfaces optimise the fibre-to-fibre physical contact characteristics.

The optical fibre endface angle (θ) for flat endface angle-polished fibres is defined as the angle between the plane perpendicular to the axis of the fibre and the plane of the flat endface. The endface angle (θ) for spherically polished angled endface fibres is the angle between the plane perpendicular to the axis of the fibre and the straight-line tangent to the polished surface at the fibre core and going to the nominal angle direction. See Figure 1.