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**Optični spojni elementi in pasivne komponente - Tehnični standard - 057-2. del:  
Optična varovalka vrste vtič-vtičnica-vtičnica za enorodno vlakno za kategorijo C -  
Nadzorovano okolje (IEC 61753-057-2:2012)**

Fibre optic interconnecting devices and passive components - Performance standard -  
Part 057-2: Single mode fibre plug-recptacle-receptacle style optical fuse for category C -  
Controlled environment (IEC 61753-057-2:2012)

**iTeh STANDARD PREVIEW**

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Betriebsverhalten - Teil  
057-2: Optische Sicherung für Einmodenfasern in Steckverbinder-Buchse-Buchse-  
Bauform für die Kategorie C - Kontrollierte Umgebung (IEC 61753-057-2:2012)

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Dispositifs d'interconnexion et composants passives à fibres optiques - Norme de  
performance - Partie 057-2: Fusible optique du type à fiche-embase à fibre unimodale  
pour catégorie C - Environnement contrôlé (CEI 61753-057-2:2012)

**Ta slovenski standard je istoveten z: EN 61753-057-2:2013**

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**ICS:**

33.180.20	Povezovalne naprave za optična vlakna	Fibre optic interconnecting devices
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EUROPEAN STANDARD  
NORME EUROPÉENNE  
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**EN 61753-057-2**

March 2013

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English version

**Fibre optic interconnecting devices and passive components -  
Performance standard -  
Part 057-2: Single mode fibre plug-receptacle style optical fuse for  
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Bauteile -  
Betriebsverhalten -  
Teil 057-2: Optische Sicherung für  
Einmodenfasern in Steckverbinder-  
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Europäisches Komitee für Elektrotechnische Normung

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## Foreword

The text of document 86B/3501/FDIS, future edition 1 of IEC 61753-057-2, 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 approved by CENELEC as EN 61753-057-2:2013.

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) 2013-10-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-01-09

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

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	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	-
IEC 60869-1	-	Fibre optic interconnecting devices and passive components - Fibre optic passive power control devices - Part 1: Generic specification	EN 60869-1	-
IEC 61300-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN 61300-1	-
IEC 61300-2-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal)	EN 61300-2-1	-
IEC 61300-2-2	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-2: Tests - Mating durability	EN 61300-2-2	-
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	EN 61300-2-6	-
IEC 61300-2-9	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-9: Tests - Shock	EN 61300-2-9	-
IEC 61300-2-14	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-14: Tests - High optical power	EN 61300-2-14	-
IEC 61300-2-17	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-17: Tests - Cold	EN 61300-2-17	-
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	EN 61300-2-18	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61300-2-19	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-19: Tests - Damp heat (steady state)	EN 61300-2-19	-
IEC 61300-2-22	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-22: Tests - Change of temperature	EN 61300-2-22	-
IEC 61300-3-2	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-2: Examinations and measurements - Polarization dependent loss in a single-mode fibre optic device	EN 61300-3-2	-
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	EN 61300-3-3	-
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 61300-3-6	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss	EN 61300-3-6	-
IEC 61300-3-7	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-7: Examinations and measurements - Wavelength dependence of attenuation and return loss of single mode components	EN 61300-3-7	-
IEC 61300-3-28	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-28: Examinations and measurements - Transient loss	EN 61300-3-28	-
IEC 61300-3-32	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-32: Examinations and measurements - Polarisation mode dispersion measurement for passive optical components	EN 61300-3-32	-
IEC 61754	Series	Fibre optic connector interfaces	EN 61754	Series
IEC 61755	Series	Fibre optic connector optical interfaces	EN 61755	Series
IEC/TR 62627-02	2010	Fibre optic interconnecting devices and passive components - Part 02: Report of round robin test results on SC plug style fixed attenuators	-	-



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# INTERNATIONAL STANDARD



**Fibre optic interconnecting devices and passive components – Performance standard –  
Part 057-2: Single mode fibre plug-receptacle style optical fuse for category C –  
Controlled environment**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES  
AND PASSIVE COMPONENTS –  
PERFORMANCE STANDARD –**

**Part 057-2: Single mode fibre plug-receptacle  
style optical fuse for category C –  
Controlled environment**

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International Standard IEC 61753-057-2 has been prepared by subcommittee SC86B: Fibre optic interconnecting devices and passive components, of IEC technical committee TC86: Fibre optics.

The text of this standard is based on the following documents:

FDIS	Report on voting
86B/3501/FDIS	86B/3545/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 in the IEC 61753 series, published under the general title *Fibre optic interconnecting devices and passive components – Performance standard*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability 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

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## INTRODUCTION

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning optical fuse.

IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he/she is willing to negotiate licences either free of charge or under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with IEC. Information may be obtained from:

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US patent US-7162,114 B2 "Optical Energy switching device and method", granted January 9,2007.

Japan patent 4376632 "Optical Energy switching device and method", granted September 18, 2009

The optical fuse is a passive device, designed to protect equipment and fibre cables from damage due to optical overpower, spikes and surges. The optical fuse produces a controlled, permanent, signal blocking at a predetermined power threshold in an optical fibre transmission line. The optical fuse is wavelength independent over its entire specified spectral range. IEC 60869-1 contains the generic information of the optical fuse. The optical fuse has a maximum allowed power input  $P_{in\ max}$  that is allowed. Beyond this power it is dysfunctional and can let light through. Numerical values for  $P_{in\ max}$  are given in Annex B.