Irish Standard
I.S. EN 61753-088-2:2013

Fibre optic interconnecting devices and passive components -Performance standard -- Part 088-2: Non-connectorized single-mode fibre optic LAN WDM devices with channel spacing of 800 GHz for category C - Controlled environments (IEC 61753-088-2:2013 (EQV))

I.S. EN 61753-088-2:2013

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EUROPEAN STANDARD

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EN 61753-088-2

June 2013

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English version

Fibre optic interconnecting devices and passive components - Performance standard - Part 088-2: Non-connectorized single-mode fibre optic LAN WDM devices with channel spacing of 800 GHz for category C - Controlled environments

(IEC 61753-088-2:2013)

Dispositifs d'interconnexion et composants passifs à fibres optiques - Norme de performance - Partie 088-2: Dispositifs LAN WDM à fibres optiques unimodales, non connectorisés, avec un espacement entre canaux de 800 GHz, pour catégorie C - Environnements contrôlés
(CEI 61753-088-2:2013)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Betriebsverhalten - Teil 088-2: Nicht mit Steckverbindern versehene Einmoden LWL-LAN-WDM-Geräte mit Kanalweiten von 800 GHz für Kategorie C - Kontrollierte Umgebung
(IEC 61753-088-2:2013)

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 61753-088-2:2013 E

Foreword

The text of document 86B/3549/FDIS, future edition 1 of IEC 61753-088-2, 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 61753-088-2:2013.

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)	2014-01-22
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-04-22

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61753-088-2:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61300-3-2	NOTE	Harmonised as EN 61300-3-2.
IEC 61753-021-2	NOTE	Harmonised as EN 61753-021-2.

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.

Publication	Year	Title	EN/HD	Year
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	-
IEC 61300	Series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures	EN 61300	Series
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 61300-2-4	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests - Fibre/cable retention	EN 61300-2-4	-
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 61300-2-17	-	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	-
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 61300-2-42	-	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	-

Publication	Year	Title	EN/HD	Year
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 61300-3-20	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-20: Examinations and measurements - Directivity of fibre optic branching devices	EN 61300-3-20	-
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 61300-3-29	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-29: Examinations and measurements - Measurement techniques for characterising the amplitude of the spectral transfer function of DWDM components	EN 61300-3-29	-
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 62074-1	-	Fibre optic interconnecting devices and passive components - Fibre optic WDM devices - Part 1: Generic specification	EN 62074-1	-
ITU-T Recommendation G.959.1	-	Optical transport network physical layer interfaces	-	-
IEEE P802.3ba	-	Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – PERFORMANCE STANDARD –

Part 088-2: Non-connectorized single-mode fibre optic LAN WDM devices with channel spacing of 800 GHz for category C – Controlled environments

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61753-088-2 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components of IEC technical committee 86: Fibre optics.

This first edition of IEC 61753-088-2 cancels and replaces IEC/PAS 61753-088-2 published in 2010.

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

FDIS	Report on voting
86B/3549/FDIS	86B/3591/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

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

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – PERFORMANCE STANDARD –

Part 088-2: Non-connectorized single-mode fibre optic LAN WDM devices with channel spacing of 800 GHz for category C – Controlled environments

1 Scope

This part of IEC 61753 contains the minimum initial test and measurement requirements and severities which a non-connectorized single-mode fibre optic Local Area Network Wavelength Division Multiplexing (LAN WDM) device with channel spacing of 800 GHz needs to satisfy in order to be categorized as meeting the requirements of Category C – Controlled environments, as defined in Annex A of IEC 61753-1:2007. The applications of LAN WDM devices are optical MUX and DEMUX for 100GBASE-LR4 (required operating range of 2 m to 10 km) and 100GBASE-ER4 (required operating range of 2 m to 30 km) defined in IEEE P802.3ba, as shown in Annex D. The requirements cover both an integrated 1×4 LAN WDM device and an individual 1×2 LAN WDM device for cascaded module construction.

2 Normative references

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.

IEC 60793-2-50, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*[1]

IEC 61300 (all parts), *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*

IEC 61300-2-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-1: Tests – Vibration (sinusoidal)*

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

IEC 61300-2-9, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-9: Tests – Shock*

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)*

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1 A fourth edition is due to be published shortly.