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Standards

Irish Standard  
I.S. EN 61753-087-6:2012

Fibre optic interconnecting devices and passive components - Performance standard -- Part 087-6: Non-connectorised single-mode bidirectional 1310 nm upstream and 1490 nm downstream WWDM devices for category O - Uncontrolled environment (IEC 61753-087-6:2012 (EQV))

## I.S. EN 61753-087-6:2012

*Incorporating amendments/corrigenda issued since publication:*

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EUROPEAN STANDARD

**EN 61753-087-6**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2012

ICS 33.180.20

English version

**Fibre optic interconnecting devices and passive components -  
Performance standard -  
Part 087-6: Non-connectorised single-mode bidirectional 1310 nm  
upstream and 1490 nm downstream WWDM devices for category O -  
Uncontrolled environment  
(IEC 61753-087-6:2012)**

Dispositifs d'interconnexion et  
composants passifs à fibres optiques -  
Norme de performance -  
Partie 087-6 : Dispositifs WWDM  
unimodaux non connectés  
bidirectionnels 1 310 nm en voie montante  
et 1 490 nm en voie descendante pour la  
catégorie O - Environnement non contrôlé

Lichtwellenleiter -  
Verbindungselemente und passive  
Bauteile -  
Betriebsverhalten -  
Teil 087-6: Nicht mit Steckverbindern  
versehene bidirektionale 1310-nm-  
upstream- und 1490-nm-downstream-  
Einmoden-WWDM-Bauteile für die  
Kategorie O -  
Unkontrollierte Umgebung  
(IEC 61753-087-6:2012)

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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**

**I.S. EN 61753-087-6:2012**

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**Foreword**

The text of document 86B/3256/CDV, future edition 1 of IEC 61753-087-6, 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 61753-087-6:2012.

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) 2012-12-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-03-27

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The text of the International Standard IEC 61753-087-6:2012 was approved by CENELEC as a European Standard without any modification.

## 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 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 61300-2-5	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-5: Tests - Torsion	EN 61300-2-5	-
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 - Optical power handling and damage threshold characterization	EN 61300-2-14	-
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	-
IEC 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	EN 61300-2-44	-

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61300-2-48	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-48: Tests - Temperature-humidity cycling	EN 61300-2-48	-
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 61300-3-6	-	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 (mod)	-	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 61753-1	-	Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standards	EN 61753-1	-
IEC 62074-1	-	Fibre optic interconnecting devices and passive components - Fibre optic WDM devices - Part 1: Generic specification	EN 62074-1	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 087-6: Non-connectorised single-mode  
bidirectional 1 310 nm upstream and  
1 490 nm downstream WDM devices for category O –  
Uncontrolled environment**

FOREWORD

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International Standard IEC 61753-087-6 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:

CDV	Report on voting
86B/3256/CDV	86B/3328/RVC

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 61753 series, under the general title *Fibre optic interconnecting devices and passive components – Performance standard*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

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.

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

### **Part 087-6: Non-connectorised single-mode bidirectional 1 310 nm upstream and 1 490 nm downstream WWDM devices for category O – Uncontrolled environment**

#### **1 Scope**

This part of IEC 61753 contains the minimum initial performance, test and measurement requirements and severities which a fibre optic pigtailed 1 310 nm upstream and 1 490 nm downstream wide wavelength division multiplexing (WWDM) passive optical network (PON) device must satisfy in order to be categorized as meeting the requirements of category O (uncontrolled environments), as defined in Annex A of IEC 61753-1.

Annex B of this standard provides information concerning the function of the 1 310 nm upstream and 1 490 nm downstream WWDM.

#### **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*

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 61300-2-5, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-5: Tests – Torsion*

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

IEC 61300-2-14, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-14: Tests – Optical power handling and damage threshold characterization*

IEC 61300-2-19, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-19: Tests – Damp heat (steady state)*

IEC 61300-2-22, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-22: Tests – Change of temperature*

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