

Irish Standard I.S. EN 61753-121-3:2010

Fibre optic interconnecting devices and passive components - Performance standard -- Part 121-3: Simplex and duplex cords with single-mode fibre and cylindrical ferrule connectors for category U - Uncontrolled environment (IEC 61753-121-3:2010 (EQV))

© NSAI 2010

No copying without NSAI permission except as permitted by copyright law.

Incorporating amendments/corrigenda issued since publication:				

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:	This document is EN 61753-121-3:	04364 0777	<i>lished:</i> ly, 2010
This document was publish under the authority of the comes into effect on: 19 July, 2010			ICS number: 33.180.20
NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie	Sales: T +353 1 857 67 F +353 1 857 67 W standards.ie	

Údarás um Chaighdeáin Náisiúnta na hÉireann

W NSALie

EUROPEAN STANDARD

EN 61753-121-3

NORME EUROPÉENNE EUROPÄISCHE NORM

July 2010

ICS 33.180.20

English version

Fibre optic interconnecting devices and passive components - Performance standard -

Part 121-3: Simplex and duplex cords with single-mode fibre and cylindrical ferrule connectors for category U - Uncontrolled environment

(IEC 61753-121-3:2010)

Dispositifs d'interconnexion et composants passifs à fibres optiques Norme de qualité de fonctionnement Partie 121-3: Cordons simplex et duplex avec fibres unimodales, munis de connecteurs à férule cylindrique pour catégorie U Environnement non contrôlé (CEI 61753-121-3:2010)

Lichtwellenleiter Verbindungselemente und passive
Bauteile Betriebsverhalten Teil 121-3: Simplex- und Duplexkabel
mit Einmoden-LichtwellenleiterSteckverbindern mit zylindrischen
Ferrulen für die Kategorie U Unkontrollierte Umgebung
(IEC 61753-121-3:2010)

This European Standard was approved by CENELEC on 2010-07-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

EN 61753-121-3:2010

- 2 -

Foreword

The text of document 86B/2989/FDIS, future edition 1 of IEC 61753-121-3, 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 61753-121-3 on 2010-07-01.

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

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) 2011-04-01

 latest date by which the national standards conflicting with the EN have to be withdrawn

(dow) 2013-07-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61753-121-3:2010 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 60794-2
 NOTE
 Harmonized as EN 60794-2.

 IEC 61300-3-28
 NOTE
 Harmonized as EN 61300-3-28.

 IEC 61756-1
 NOTE
 Harmonized as EN 61756-1.

EN 61753-121-3:2010

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 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>	EN/HD	<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 60794-1-2	-	Optical fibre cables - Part 1-2: Generic specification - Basic optical cable test procedures	EN 60794-1-2	-
IEC 60794-2-50	-	Optical fibre cables - Part 2-50: Indoor cables - Family specification for simplex and duplex cables for use in terminated cable assemblies	EN 60794-2-50	-
IEC 61300	Series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures	EN 61300	Series
IEC 61300-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance	EN 61300-1	-
IEC 61300-2-4	-	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 61300-2-22	-	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	-

EN 61753-121-3:2010

- 4 -

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
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 f	-
IEC 61300-3-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-1: Examinations and measurements - Visual examination	EN 61300-3-1	-
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 61300-3-6	-	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 61300-3-15	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-15: Examinations and measurements - Dome eccentricity of a convex polished ferrul endface		-
IEC 61300-3-16	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-16: Examinations and measurements - Endface radius of spherically polished ferrule		-
IEC 61300-3-17	-	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	-
IEC 61300-3-22	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-22: Examinations and measurements - Ferrule compression force	EN 61300-3-22	-
IEC 61300-3-23	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-23: Examination and measurements - Fibre position relative to ferrule endface	EN 61300-3-23	-
IEC 61300-3-34	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-34: Examinations and measurements - Attenuation of random mated connectors	EN 61300-3-34	-

- 5 -

EN 61753-121-3:2010

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 61300-3-35	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-35: Examinations and measurements - Fibre optic cylindrical connector endface visual and automated inspection	EN 61300-3-35	-
IEC 61753	Series	Fibre optic interconnecting devices and passive components performance standard	EN 61753	Series
IEC 61753-1	-	Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standards	EN 61753-1	-
IEC 61754	Series	Fibre optic connector interfaces	EN 61754	Series
IEC 61755	Series	Fibre optic connector optical interfaces	EN 61755	Series
IEC 61755-2-1	-	Fibre optic connector optical interfaces - Part 2-1: Optical interface standard single mode non-angled physically contacting fibres	EN 61755-2-1	-
IEC 61755-2-2	-	Fibre optic connector optical interfaces - Part 2-2: Optical interface standard single mode 8 degrees angled physically contacting fibres	EN 61755-2-2	-
IEC/TR 61931	-	Fibre optic - Terminology	-	-

This is a free page sample. Access the full version online.

I.S. EN 61753-121-3:2010

This page is intentionally left BLANK.

- 2 - 61753-121-3 © IEC:2010(E)

CONTENTS

FOI	REWC	ORD	4		
1	1 Scope				
2	Normative references				
3 Terms and definitions					
4	Desc	cription	8		
	4.1	General			
	4.2	Optical fibres			
	4.3	Cable design and construction			
	4.4	Optical connectors			
		4.4.1 Mechanical connectivity			
		4.4.2 Optical performance requirements			
		4.4.3 Connector set performance requirements			
	4.5	Cable bend radius			
	4.6	Identification	9		
5	Tests	s	9		
	5.1	General	9		
	5.2	Measuring wavelengths	9		
	5.3	Test specimen	. 10		
6	Test	procedure	. 10		
	6.1	General	. 10		
	6.2	Visual examination	. 10		
	6.3	Fibre optic connector end face	. 10		
	6.4	Optical performance requirements	. 11		
	6.5	Climatic performance requirements			
	6.6	Mechanical performance requirements			
7	Test	report	. 16		
Anr	nex A	(normative) Sample size and product sourcing requirements	. 17		
Anr	nex B	(normative) Visual examination of outer cable sheath movement	. 18		
Anr	nex C	(normative) Change of temperature	. 19		
Anr	nex D	(normative) Static side load	. 20		
Anr	nex E	(normative) Flexing strain relief of fibre optic devices	.21		
Bib	liograi	phy	.22		
	ا ۳ دل د	, ,			
Fici	ure B	.1 – Initial marking of the cable sheath	18		
_		.2 – Final visual examination			
_					
		.1 – Change of temperature test configuration			
		.1 – Test apparatus for transmission with applied side load			
Fig	ure E.	.1 – Flexing test apparatus	. 21		
Tab	ole 1 –	- Wavelengths for attenuation and return loss measurements	9		
Tab	le 2 –	- Visual examination requirements	. 10		
Tab	le 3 –	- End face requirements	. 11		
		Optical performance requirements			
		- Climatic performance requirements			

This is a free page sample. Access the full version online.

I.S. EN 61753-121-3:2010

61753-121-3 © IEC:2010(E)	- 3 -	
Table 6 – Mechanical performance requirem	ients	. 14
Table A.1 – Sample size requirements		. 17



This is a free preview	 Purchase the entire 	e publication at the link below:
------------------------	---	----------------------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation