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Standards

Irish Standard  
I.S. EN 50377-2-2:2009

Connector sets and interconnect components to be used in optical fibre communication systems -  
Product specifications -- Part 2-2:  
FC/APC 8 terminated on IEC 60793-2-50 category B1.1 and B1.3 singlemode fibre, with full zirconia ferrule, category C

**I.S. EN 50377-2-2:2009**

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Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD

**EN 50377-2-2**

NORME EUROPÉENNE

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May 2009

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English version

**Connector sets and interconnect components  
to be used in optical fibre communication systems -  
Product specifications -  
Part 2-2: FC/APC 8 terminated on IEC 60793-2-50 category B1.1 and B1.3  
singlemode fibre, with full zirconia ferrule, category C**

Jeux de connecteurs et composants  
d'interconnexion à utiliser  
dans les systèmes de communication  
par fibres optiques -  
Spécifications de produit -  
Partie 2-2: Type FC/APC 8 connectés  
sur fibre unimodale  
de catégorie B1.1 et B1.3  
de la CEI 60793-2-50,  
avec fêrûle tout zircone, catégorie C

Steckverbindersätze  
und Verbindungselemente  
für Lichtwellenleiter-  
Datenübertragungssysteme -  
Produktnormen -  
Teil 2-2: Bauart FC/APC 8  
mit Zirkoniumstift zum Anschluss  
an Einmodenfasern  
der Kategorien B1.1 und B1.3  
nach IEC 60793-2-50 für Kategorie C

This European Standard was approved by CENELEC on 2008-12-01. 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: avenue Marnix 17, B - 1000 Brussels**

## Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 86BXA, Fibre optic interconnect, passive and connectorised components.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50377-2-2 on 2008-12-01.

The following dates were fixed:

- latest date by which the EN has to be implemented  
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national standard or by endorsement (dop) 2009-12-01
  - latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2011-12-01
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**CONNECTOR SETS AND INTERCONNECT COMPONENTS TO BE USED IN OPTICAL FIBRE COMMUNICATION SYSTEMS – PRODUCT SPECIFICATIONS**

**Part 2-2: FC/APC 8 terminated on IEC 60793-2-50 category B1.1 and B1.3 singlemode fibre, with full zirconia ferrule, category C**

Description		Performance	
Coupling mechanism:	screw	Application:	For use in EN category C (controlled environment)
Configuration:	plug/adaptor/plug	Attenuation grades: (random mate)	B: $\leq 0,12$ dB mean $\leq 0,25$ dB for $> 97$ % of measurements
Fibre category:	EN 60793-2-50 type B1.1 and B1.3		C: $\leq 0,25$ dB mean $\leq 0,50$ dB for $> 97$ % of measurements
Cable type:	see Table 3	Return loss grades: (random mate)	1: $\geq 60$ dB (mated), $> 55$ dB (unmated)

**Related documents:**

EN 60794-2, *Optical fibre cables – Part 2: Indoor cables – Sectional specification* (IEC 60794-2)

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

EN 61753-1, *Fibre optic interconnecting devices and passive components performance standard – Part 1: General and guidance for performance standards* (IEC 61753-1)

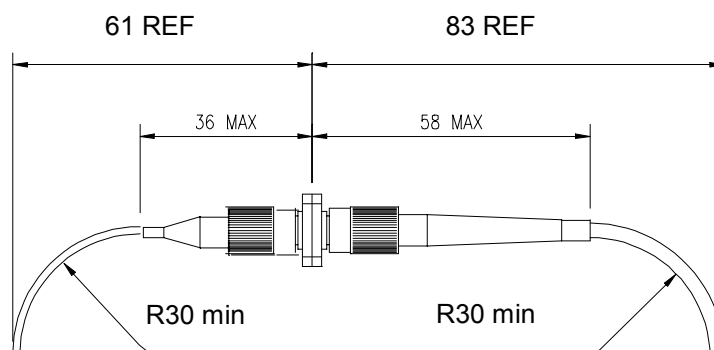
EN 61754-13, *Fibre optic connector interfaces – Part 13: Type FC-PC connector* (IEC 61754-13)

EN 61755-1, *Fibre optic connector optical interfaces – Part 1: Optical interfaces for single mode non-dispersion shifted fibres – General and guidance* (IEC 61755-1)

EN 61755-3-2, *Fibre optic connector optical interfaces – Part 3-2: Optical interface, 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules for 8 degrees angled-PC single mode fibres* (IEC 61755-3-2, mod.)

ETSI TS 100 671, *Transmission and Multiplexing (TM); Passive optical components; Optical fibre connectors for single-mode optical fibre communication systems; Common requirements and conformance testing*

**Outline dimensions and maximum dimensions:**



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## 1 Scope

### 1.1 Product definition

This European Standard contains the initial, start of life dimensional, optical, mechanical and environmental performance requirements which a connector terminated with cylindrical zirconia 8 degree angled PC ferrule and assembled singlemode resilient alignment sleeve FC-APC simplex connector set (plug/adaptor/plug), adaptor and patchcord must meet in order for it to be categorised as an EN standard product.

Since different variants and grades of performance are permitted, product marking details are given in 3.5.

### 1.2 Intermateability

Although all products conforming to the requirements of this standard will intermate, the resulting level of random attenuation performance will only be ensured in accordance with Table 1. The intention is that this will be true irrespective of the manufacturing source(s) of the product.

When intermating plug variants have different attenuation grades, the resulting level of attenuation cannot be assured to be any better than the worst attenuation grade.

The intermating of a grade C plug with a grade B plug will result in an uncertain level of random attenuation performance.

**Table 1 – Ensured level of random attenuation**

Plug variant / Attenuation grade	C	B
C	C	C
B	C	B

### 1.3 Operating environment

The tests selected combined with the severities and durations are representative of a category C environment described in EN 61753-1.

### 1.4 Reliability

Whilst the anticipated service life expectancy of the product in this environment is 20 years, compliance with this standard does not guarantee the reliability of the product. This should be predicted using a recognised reliability assessment programme.

### 1.5 Quality assurance

Compliance with this standard does not guarantee the manufacturing consistency of the product. This should be maintained using a recognised quality assurance programme.



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