



National Standards Authority of Ireland

IRISH STANDARD

**I.S. EN 50377-10-2:2005**

ICS 33.180.20

**CONNECTORS SETS AND INTERCONNECT  
COMPONENTS TO BE USED IN OPTICAL  
FIBRE COMMUNICATION SYSTEMS -  
PRODUCT SPECIFICATIONS PART 10-2:  
MU-APC SINGLEMODE TERMINATED ON IEC  
60793-2 CATEGORY B1 FIBRE**

National Standards  
Authority of Ireland  
Glasnevin, Dublin 9  
Ireland

Tel: +353 1 807 3800  
Fax: +353 1 807 3838  
<http://www.nsai.ie>

**Sales**  
<http://www.standards.ie>

*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland and comes into  
effect on:  
July 1, 2005*

**NO COPYING WITHOUT NSAI  
PERMISSION EXCEPT AS  
PERMITTED BY COPYRIGHT  
LAW**

© NSAI 2005

**Price Code J**

Údarás um Chaighdeáin Náisiúnta na hÉireann



EUROPEAN STANDARD

**EN 50377-10-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2005

ICS 33.180.20

English version

**Connectors sets and interconnect components  
to be used in optical fibre communication systems –  
Product specifications  
Part 10-2: MU-APC singlemode terminated on IEC 60793-2  
category B1 fibre**

Jeux de connecteurs et composants  
d'interconnexion à utiliser dans  
les systèmes de communication  
par fibres optiques –  
Spécifications de produit  
Partie 10-2: Type MU-APC câblé  
sur une fibre unimodale de la catégorie  
B1 de la CEI 60793-2

Steckverbindersätze und Verbindungs-  
bauelemente für Lichtwellenleiter-  
Datenübertragungssysteme –  
Produktnormen  
Teil 10-2: Bauart MU-APC zum Anschluss  
an Einmodenfasern der Kategorie B1.1  
nach IEC 60793-50

This European Standard was approved by CENELEC on 2004-12-01. 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.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 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 project was submitted to the Unique Acceptance Procedure and was approved by CENELEC on 2004-12-01.

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) 2005-12-01
  - latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2007-12-01
-

**PRODUCT SPECIFICATION FOR CONNECTOR SET TO BE USED IN SINGLE MODE OPTICAL FIBRE COMMUNICATION SYSTEMS**

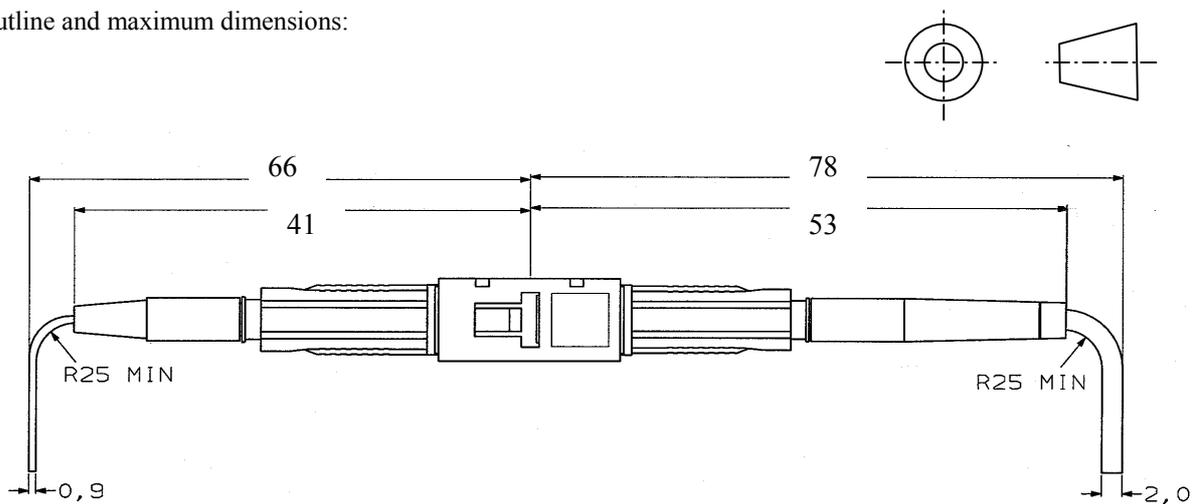
Type: **MU-APC singlemode terminated on IEC 60793-2 category B1 fibre**

Description		Performance	
Coupling mechanism:	push-pull	Application:	For use in EN Category U and ES 200-671 environments (see 1.3)
Configuration:	plug/adaptor/plug	Attenuation Grades: (Random Mate)	P: <0,35 dB mean. <1,0 dB for >97% of measurements Q: <0,30 dB mean. <0,60 dB for >99% of measurements
Fibre category:	IEC 60793-2-50 type B1	Return Loss:	V: $\geq 55$ dB unmated
Cable type	see Table 3		

Related documents:

IEC 61754-6	Fibre optic connector interfaces - Part 6: Type MU connector family
EN 61300-series	Fibre optic interconnecting devices and passive components – Basic test and measurement procedures
IEC 60794-2	Optical Fibre Cables - Part 2: Indoor cables – Sectional specification
IEC 61753-1-1	Fibre optic interconnecting devices and passive components performance standard – Part 1-1: General and guidance - Interconnecting devices (connectors)
EN 186000	Generic Specification – connector sets for optical fibres and cables
ES 200 671	Transmission and Multiplexing (TM) – Passive optical components – Optical fibre connectors for single-mode optical fibre communication systems – Common requirements and conformance testing
EN 300 019-series	Equipment Engineering (EE) – Environmental conditions and environmental tests for telecommunications equipment
IEC 60793-2 -50	Optical Fibre Cables - Part 2-50: Product Specifications

Outline and maximum dimensions:



## Contents

1	Scope .....	6
1.1	Product definition.....	6
1.2	Intermateability .....	6
1.3	Operating environment.....	6
1.4	Reliability.....	6
1.5	Quality assurance .....	6
2	Normative references .....	7
3	Description.....	8
3.1	Plug .....	8
3.2	Adaptor .....	8
3.3	Materials .....	8
3.4	Dimensions.....	8
3.5	Colour and marking.....	8
4	Variants.....	9
4.1	Terminated plug .....	9
4.2	Adaptor .....	9
4.2.1	Identification of variants .....	9
5	Dimensional requirements .....	10
5.1	Outline dimensions.....	10
5.1.1	Plug variants.....	10
5.1.2	Adaptor variants .....	11
5.2	Mating face and other limit dimensions .....	13
5.2.1	Plug .....	13
5.2.2	Ferrule endface geometry after termination.....	15
5.2.3	Positioning of fibre core centre .....	16
5.2.4	Control of fibre axis .....	17
5.2.5	Adaptor.....	18
5.2.6	Pin gauge for adaptor .....	20
6	Tests.....	21
6.1	Sample size .....	21
6.2	Test and measurement methods.....	21
6.3	Test sequence .....	21
6.4	Pass/fail criteria.....	21
7	Test report.....	21
8	Testing requirements.....	22
8.1	Dimensional and marking requirements .....	22
8.2	Optical performance requirements .....	22
8.3	Mechanical performance requirements .....	24
8.4	Environmental performance requirements .....	28
	Annex A (normative) Reference connector details.....	31
	Annex B (normative) Sample size and product sourcing requirements.....	32
	<b>Figures</b>	
	Figure 1 - Outline dimensions – Plug .....	10
	Figure 2 – Outline dimensions – Adaptor .....	12
	Figure 3 - Plug mating face and other limit dimensions .....	13
	Figure 4 - Ferrule endface geometry after termination .....	15
	Figure 5 - Positioning of fibre core to ferrule centre and connector key .....	16
	Figure 6 - Allowable angle of fibre axis versus position of fibre core .....	17
	Figure 7 - Mating face and other limit dimensions – Adaptor.....	18
	Figure 8 - Pin gauge for adaptor.....	20
	<b>Tables</b>	
	Table 1 - Ensured level of random attenuation.....	6
	Table 2 - Preferred colour scheme .....	8
	Table 3 - Plug variants .....	9

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

[Product Page](#)

- 
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
  - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-