INTERNATIONAL STANDARD

IEC 61753-022-2

First edition
2003-02

Fibre optic interconnecting devices and passive components performance standard –

Part 022-2:
Fibre optic connectors terminated on multimode fibre for category C – Controlled environment

Norme de qualité de fonctionnement des dispositifs d'interconnexion et composants passifs à fibres optiques –

Partie 022-2:
Connecteurs à fibres optiques raccordés à une fibre multimode pour la catégorie C – Environnement contrôlé

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS PERFORMANCE STANDARD –

Part 022-2: Fibre optic connectors terminated on multimode fibre for category C – Controlled environment

FOREWORD

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International Standard IEC 61753-022-2 has been prepared by sub-committee 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:

FDIS	Report of voting
86B/1776/FDIS	86B/1830/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.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

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- withdrawn;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

A bilingual version of this publication may be issued at a later date.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS PERFORMANCE STANDARD –

Part 022-2: Fibre optic connectors terminated on multimode fibre for category C – Controlled environment

1 Scope

This part of IEC 61753 contains the minimum requirements and severities which a fibre optic connector terminated on multimode fibre must satisfy in order to be categorised as meeting the IEC standard category C – Controlled Environment, as defined in annex A of IEC 61753-1-1.

2 Normative references

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.

60793-2:1998, *Optical fibres – Part 2: Product specifications*

61300 (all parts), *Fibre optic interconnecting devices and passive components*

61300-2-1:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-1: Tests – Vibration (sinusoidal)*

61300-2-2:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-2: Tests – Mating durability*

61300-2-4:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-4: Tests – Fibre/cable retention*

61300-2-6:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-6: Tests – Tensile strength of coupling mechanism*

61300-2-12:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-12: Tests – Impact*

61300-2-17:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-17: Tests – Cold*

61300-2-18:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-18: Tests – Dry heat – High temperature endurance*

61300-2-19:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-19: Tests – Damp heat (steady state)*

61300-2-22:1995, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-22: Tests – Change of temperature*

61300-2-42:1998, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-42: Tests – Static side load for connectors*

61300-3-3:1997, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-3: Examinations and measurements – Monitoring change in attenuation and in return loss (multiple paths)*

61300-3-4:2001, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-4: Examinations and measurements – Attenuation*

61300-3-6:1997, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-6: Examinations and measurements – Return loss*

61300-3-28:2002, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-28: Examinations and measurements – Transient loss*

61300-3-34:2001, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-34: Examinations and measurements – Attenuation of random mated connectors*

61753-1-1:2000, *Fibre optic interconnecting devices and passive components performance standard – Part 1-1: General and guidance – Interconnecting devices (connectors)*

3 Test

All test methods are in accordance with the IEC 61300 series of standards.

The connector shall be terminated onto multimode fibre as per IEC 60793-2, fibre type A1a or A1b, in either secondary coated or reinforced cable format.

Each test defines the number of samples to be evaluated.

The samples used for each test are intended to be previously unstressed new samples, but may be selected from previously used samples if so desired.

All optical testing shall be carried out at a central wavelength of 1 300 nm ± 30 nm. Attenuation (reference) is the only test that calls up additional testing at the central wavelength of 850 nm ± 30 nm.

Source characteristics S2, S3 and detector D1 refer to IEC 61300-3-4.

Launch conditions shall be in accordance with IEC 61300-1, annex B, case 2: equilibrium mode distribution. Useful information to obtain that condition is given in 4.2 of IEC 61300-3-34.

The full set of tests shall be carried out for all fibre types for which compliance to this standard is claimed.

For different cable structures only requalification to tests 4, 5, 8, 10, 11, 12 and 13 is requested.

Change in attenuation, for the purpose of the test, is defined as the peak to peak variation and shall be measured using IEC 61300-3-3. For monitoring intermittent discontinuities during a test, IEC 61300-3-28 shall be used.