

INTERNATIONAL STANDARD



**Fibre optic interconnecting devices and passive components – Performance standard –
Part 041-2: Non-connectorized single-mode OTDR reflecting device for category C – Controlled environment**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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 DEVICES AND PASSIVE COMPONENTS –
 PERFORMANCE STANDARD –**

**Part 041-2: Non-connectorized single-mode OTDR
 reflecting device for category C –
 Controlled environment**

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International Standard IEC 61753-041-2 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:

FDIS	Report on voting
86B/3750/FDIS	86B/3778/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.

A list of all parts of IEC 61753 series, under the general title *Fibre optic interconnecting devices and passive components performance standards*, can be found on the IEC website.

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – PERFORMANCE STANDARD –

Part 041-2: Non-connectorized single-mode OTDR reflecting device for category C – Controlled environment

1 Scope

This part of IEC 61753 contains the minimum initial performance, test and measurement requirements and severities which a fibre optic non-connectorized OTDR reflecting device for monitoring point to point (PTP) or point to multipoint (PTMP) passive optical networks (PON) using an optical time-domain reflectometer (OTDR) should satisfy in order to be categorized as meeting the requirements of category C (controlled environments), as defined in Annex A of IEC 61753-1:2007.

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 (all parts), *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*

IEC 61300-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 1: General and guidance*

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 61300-2-9, *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 – High optical power*

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

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

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*

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*

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*

IEC 61300-3-2, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-2: Examination and measurements – Polarization dependent loss in a single-mode fibre optic device*

IEC 61300-3-7, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-7: Examination and measurements – Wavelength dependence of attenuation and return loss of single mode components*

IEC 61753-1:2007, *Fibre optic interconnecting devices and passive components performance standard – Part 1: General and guidance for performance*

IEC 62074-1, *Fibre optic WDM devices – Part 1: Generic specification*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions, as well as those given in IEC 62074-1, apply.

3.1.1

OTDR reflecting device

wavelength-selective reflecting device having two ports that light from the signal wavelength ranges transmits from the first port to the second port and OTDR light from the OTDR wavelength range launched into one port is (partly) reflected back to that launch port

Note 1 to entry: Annex B of this standard provides information concerning the function of the OTDR reflecting device.

3.1.2

Type A of OTDR reflecting device

OTDR reflecting device with low attenuation

Note 1 to entry: Examples are shown in Figures B.2, B.5, B.6, B.7 and B.8 of Annex B.

3.1.3

Type B of OTDR reflecting device

OTDR reflecting device with higher attenuation

Note 1 to entry: Examples are shown in Figures B.3 and B.4 of Annex B.

3.2 Abbreviations

Abbreviations in order of appearance:

OTDR: Optical time-domain reflectometer