

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Fibre optic interconnecting devices and passive components – Performance standard –

Part 081-02: Non-connectorized single-mode fibre optic middle-scale 1 × N DWDM devices for category C – Controlled environments

Dispositifs d'interconnexion et composants passifs fibroniques – Norme de performance –

Partie 081-02 : Dispositifs DWDM 1 × N de milieu d'échelle fibroniques unimodaux, non connectorisés, pour catégorie C – Environnements contrôlés



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES
AND PASSIVE COMPONENTS –
PERFORMANCE STANDARD –****Part 081-02: Non-connectorized single-mode fibre optic middle-scale
1 × N DWDM devices for category C – Controlled environments**

FOREWORD

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IEC 61753-081-02 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

This first edition cancels and replaces IEC 61753-081-2 published in 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 61753-081-2:2014:

- a) change of test conditions harmonizing with IEC 61753-1:2018;
- b) harmonization of the measurement uncertainties in Table 2 to Table 4 with IEC 61753-081-03 and IEC 61753-081-06.

The text of this International Standard is based on the following documents:

Draft	Report on voting
86B/4802/FDIS	86B/4823/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2 and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under store.iec.ch in the data related to the specific document. At this date, the document will be

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – PERFORMANCE STANDARD –

Part 081-02: Non-connectorized single-mode fibre optic middle-scale $1 \times N$ DWDM devices for category C – Controlled environments

1 Scope

This part of IEC 61753 contains the minimum initial test and measurement requirements and severities which a fibre optic middle-scale $1 \times N$ ($16 \leq N \leq 64$) DWDM (dense wavelength division multiplexing) arrayed waveguide grating device with channel spacing of 50 GHz, 100 GHz or 200 GHz satisfies in order to be categorized as meeting the requirements of category C (controlled environment). The requirements are given for the DWDM devices with Gaussian passband profile and flat-top passband profile. The requirements exclude the devices with dynamic electrical temperature control.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60793-2-50, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*

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*

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 or cable retention*

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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*