

<b>STN</b>	<b>Optovláknové spájacie prvky a pasívne súčiastky. Norma na prevádzkové charakteristiky. Časť 081-2: Bezkonektorové jednovláknové prvky 1 x N DWDM strednej veľkosti pre kategóriu C - kontrolované prostredia.</b>	<b>STN EN 61753-081-2</b>
		35 9254

Fibre optic interconnecting devices and passive components - Performance standard - Part 081-2: Non-connectorized single-mode fibre optic middle-scale 1 x N DWDM devices for category C - Controlled environments

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/15

Obsahuje: EN 61753-081-2:2014, IEC 61753-081-2:2014

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Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2015  
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

**EN 61753-081-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2014

ICS

English Version

**Fibre optic interconnecting devices and passive components -  
Performance standard - Part 081-2: Non-connectorized single-  
mode fibre optic middle-scale 1 x N DWDM devices for category  
C - Controlled environments  
(IEC 61753-081-2:2014)**

Dispositifs d'interconnexion et composants passifs à fibres  
optiques - Norme de performance - Partie 081-2: Dispositifs  
DWDM 1 x N de milieu d'échelle à fibres optiques  
unimodales, non connectorisés, pour catégorie C -  
Environnements contrôlés  
(CEI 61753-081-2:2014)

Lichtwellenleiter - Verbindungselemente und passive  
Bauteile - Betriebsverhalten - Teil 081-2: Nicht mit  
Steckverbinder versehene mittelgroße Einmoden-  
Lichtwellenleiter-1-x-N-DWDM-Bauteile für die Kategorie C  
- Kontrollierte Umgebung  
(IEC 61753-081-2:2014)

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Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

The text of document 86B/3646/CDV, future edition 2 of IEC 61753-081-2, prepared by SC 86B "Fibre optic interconnecting devices and passive components" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61753-081-2:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-03-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-05-29

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-2-50	2012	Optical fibres -- Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	2013
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	EN 60794-2-50	-
IEC 61300-2-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-1: Tests - Vibration (sinusoidal)	EN 61300-2-1	-
IEC 61300-2-4	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-4: Tests - Fibre/cable retention	EN 61300-2-4	-
IEC 61300-2-9	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-9: Tests - Shock	EN 61300-2-9	-
IEC 61300-2-14	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-14: Tests - High optical power	EN 61300-2-14 +AC	2011
IEC 61300-2-17	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-17: Tests - Cold	EN 61300-2-17	-
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	EN 61300-2-18	-
IEC 61300-2-19	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-19: Tests - Damp heat (steady state)	EN 61300-2-19	-
IEC 61300-2-22	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-22: Tests - Change of temperature	EN 61300-2-22	-
IEC 61300-2-42	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 2-42: Tests - Static side load for strain relief	EN 61300-2-42	-

IEC 61300-3-2	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 3-2: Examinations and measurements - Polarization dependent loss in a single-mode fibre optic device	and EN 61300-3-2	-
IEC 61300-3-6	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 3-6: Examinations and measurements - Return loss	and EN 61300-3-6	-
IEC 61300-3-20	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 3-20: Examinations and measurements - Directivity of fibre optic branching devices	and EN 61300-3-20	-
			+EN 61300-3-2002 20:2001/corrigendum Mar. 2002	
IEC 61300-3-29	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 3-29: Examinations and measurements - Spectral transfer characteristics of DWDM devices	and EN 61300-3-29	-
IEC 61300-3-32	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 3-32: Examinations and measurements - Polarisation mode dispersion measurement for passive optical components	and EN 61300-3-32	-
IEC 61300-3-38	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -- Part 3-38: Examinations and measurements - Group delay, chromatic dispersion and phase ripple	and EN 61300-3-38	-
IEC 61753-021-2	-	Fibre optic interconnecting devices and passive components performance standard -- Part 021-2: Grade C/3 single-mode fibre optic connectors for category C - Controlled environment	and EN 61753-021-2	-
IEC 62074-1	-	Fibre optic interconnecting devices and passive components - Fibre optic WDM devices -- Part 1: Generic specification	and EN 62074-1	-
ITU	series	Pulse code modulation (PCM) of voice-frequencies		series



# INTERNATIONAL STANDARD

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**Fibre optic interconnecting devices and passive components – Performance standard –  
Part 081-2: Non-connectorized single-mode fibre optic middle-scale  
1 × N DWDM devices for category C – Controlled environments**





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# INTERNATIONAL STANDARD

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**Fibre optic interconnecting devices and passive components – Performance standard –  
Part 081-2: Non-connectorized single-mode fibre optic middle-scale  
1 × N DWDM devices for category C – Controlled environments**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES  
AND PASSIVE COMPONENTS –  
PERFORMANCE STANDARD –****Part 081-2: Non-connectorized single-mode fibre optic middle-scale  
1 × N DWDM devices for category C – Controlled environments**

## FOREWORD

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International Standard IEC 61753-081-2 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2009 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- to add passband ripple as a test item;
- to revise details to be specified and the formats of Tables 2, 3 and 4;
- to add IEC 61300-3-38 as a normative reference.

The text of this standard is based on the following documents:

CDV	Report on voting
86B/3646/CDV	86B/3720/RVC

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.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. 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 081-2: Non-connectorized single-mode fibre optic middle-scale 1 × 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 × N ( $16 \leq N \leq 64$ ) DWDM (dense wavelength division multiplexing) device with channel spacing of 50 GHz, 100 GHz or 200 GHz needs to satisfy 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 cover devices with single-mode non-connectorized pigtails and no circuit board.

#### **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 60793-2-50:2012, *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 61300-2-1, *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 61300-3-2, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-2: Examinations and measurements – Polarization dependence of attenuation in a single-mode fibre optic device*

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

IEC 61300-3-20, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-20: Examinations and measurements – Directivity of fibre optic branching devices*

IEC 61300-3-29, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-29: Examinations and measurements – Measurement techniques for characterizing the amplitude of the spectral transfer function of DWDM components*

IEC 61300-3-32, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-32: Examinations and measurements – Polarization mode dispersion measurement for passive optical components*

IEC 61300-3-38, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-38: Examinations and measurements – Group delay, chromatic dispersion and phase ripple*

IEC 61753-021-2, *Fibre optic interconnecting devices and passive components performance standard – Part 021-2: Fibre optic connectors terminated on single mode fibre for category C – Controlled environment*

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

ITU-T Recommendation G series – Supplement 39, *Optical system design and engineering considerations*

ITU-T Recommendation G.692, *Optical interfaces for multichannel systems with optical amplifiers*

ITU-T Recommendation G.694.1, *Spectral grids for WDM applications: DWDM frequency grid*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**