

<b>STN</b>	<b>Optovláknové spájacie prvky a pasívne súčiastky. Norma na prevádzkové charakteristiky. Časť 381-2: Cyklicky usporiadaná mriežka vlnovodov pre kategóriu C (kontrolované prostredie).</b>	<b>STN EN 61753-381-2</b>
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Fibre optic interconnecting devices and passive components - Performance standard - Part 381-2: Cyclic arrayed waveguide grating - Category C (controlled environment)

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. 08/16

Obsahuje: EN 61753-381-2:2016, IEC 61753-381-2:2016

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EUROPEAN STANDARD

**EN 61753-381-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2016

ICS 33.180.20

English Version

Fibre optic interconnecting devices and passive components -  
Performance standard -  
Part 381-2: Cyclic arrayed waveguide grating -  
Category C (controlled environment)  
(IEC 61753-381-2:2016)

Dispositifs d'interconnexion et composants passifs  
à fibres optiques - Norme de performance -  
Partie 381-2: Réseau sélectif planaire cyclique -  
Catégorie C (environnement contrôlé)  
(IEC 61753-381-2:2016)

Lichtwellenleiter - Verbindungselemente und passive  
Bauteile - Betriebsverhalten -  
Teil 381-2: Zyklisches Array-Wellenleitergitter für die  
Kategorie C - Kontrollierte Umgebung  
(IEC 61753-381-2:2016)

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Europäisches Komitee für Elektrotechnische Normung

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## European foreword

The text of document 86B/3954/FDIS, future edition 1 of IEC 61753-381-2, 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 61753-381-2:2016.

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) 2016-11-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-02-09

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## Endorsement notice

The text of the International Standard IEC 61753-381-2:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61300	NOTE	Harmonized in EN 61300 series.
IEC 61753-081-2	NOTE	Harmonized as EN 61753-081-2.
IEC 61753-1	NOTE	Harmonized as EN 61753-1.

## 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 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	-
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	-

**EN 61753-381-2:2016**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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 61300-2-44	-	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	EN 61300-2-44	-
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	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	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	EN 61300-3-20	-
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	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 - Polarization mode dispersion measurement for passive optical components	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	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	EN 61753-021-2	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62074-1	-	Fibre optic interconnecting devices and passive components - Fibre optic WDM devices - Part 1: Generic specification	EN 62074-1	-
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	-	-
ITU-T Recommendation G.698.3	-	Multichannel seeded DWDM applications with single-channel optical interfaces	-	-



# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Fibre optic interconnecting devices and passive components – Performance standard –  
Part 381-2: Cyclic arrayed waveguide grating – Category C (controlled environment)**

**Dispositifs d'interconnexion et composants passifs à fibres optiques – Norme de performance –  
Partie 381-2: Réseau sélectif planaire cyclique – Catégorie C (environnement contrôlé)**





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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Fibre optic interconnecting devices and passive components – Performance standard –  
Part 381-2: Cyclic arrayed waveguide grating – Category C (controlled environment)**

**Dispositifs d'interconnexion et composants passifs à fibres optiques – Norme de performance –  
Partie 381-2: Réseau sélectif planaire cyclique – Catégorie C (environnement contrôlé)**

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## CONTENTS

FOREWORD .....	3
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	6
4 Test conditions .....	7
5 Test report.....	7
6 Reference components .....	8
7 Performance requirements.....	8
7.1 Dimensions .....	8
7.2 Test details and requirements .....	8
Annex A (normative) Sample size .....	14
Annex B (informative) General information on cyclic AWGs .....	15
Annex C (informative) Channel frequency range and free spectral range .....	17
Annex D (informative) Summary of differences between IEC 61753-081-2 and IEC 61753-381-2 .....	18
Bibliography.....	19
Figure 1 – Illustration of cyclic AWGs.....	7
Figure B.1 – Single bidirectional transmission with cyclic AWGs .....	15
Figure B.2 – Reference diagram of ITU-T G.698.3 .....	16
Figure C.1 – Description of channel frequency range and free spectral range .....	17
Table 1 – Tests and requirements of optical performance parameters.....	9
Table 2 – Environmental tests & mechanical tests .....	12
Table A.1 – Sample size .....	14
Table D.1 – Summary of differences between IEC 61753-081-2 and IEC 61753-381-2.....	18

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING  
DEVICES AND PASSIVE COMPONENTS –  
PERFORMANCE STANDARD –**

**Part 381-2: Cyclic arrayed waveguide grating –  
Category C (controlled environment)**

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International Standard IEC 61753-381-2 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/3954/FDIS	86B/3969/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 in the IEC 61753 series, published under the general title *Fibre optic interconnecting devices and passive components – Performance standard*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

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

# FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – PERFORMANCE STANDARD –

## Part 381-2: Cyclic arrayed waveguide grating – Category C (controlled environment)

### 1 Scope

This part of IEC 61753 contains the minimum initial test and measurement requirements and severities which a Gaussian-passband-profile cyclic arrayed waveguide grating (AWG) for single-mode and bidirectional transmission systems satisfies in order to be categorised as meeting the requirements of IEC 61753-1 for category C (controlled environment). This standard pertains to wavelength division multiplexing (WDM) network with multiple spectral-band usage. This standard covers the requirements of cyclic AWG devices with free spectral range (FSR) characteristics to ensure multiple spectral bands transmission performance, with single-mode non-connectorised pigtails and no electric 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 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 strain relief*

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 61300-3-6, *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 – Spectral transfer characteristics of DWDM devices*

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: Grade C/3 single-mode fibre optic connectors for category C – Controlled environment*

IEC 62074-1, *Fibre optic interconnecting devices and passive components – Fibre optic WDM devices – Part 1: Generic specification*

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*

ITU-T Recommendation G.698.3, *Multichannel seeded DWDM applications with single-channel optical interfaces*

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