



**NSAI**  
Standards

Irish Standard  
I.S. EN 61977:2015

# Fibre optic interconnecting devices and passive components - Fibre optic filters - Generic specification

**I.S. EN 61977:2015**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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EN 61977:2015

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## National Foreword

I.S. EN 61977:2015 is the adopted Irish version of the European Document EN 61977:2015, Fibre optic interconnecting devices and passive components - Fibre optic filters - Generic specification

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**EUROPEAN STANDARD**

**EN 61977**

**NORME EUROPÉENNE**

**EUROPÄISCHE NORM**

November 2015

ICS 33.180.20

Supersedes EN 61977:2010

English Version

**Fibre optic interconnecting devices and passive components -  
Fibre optic filters - Generic specification  
(IEC 61977:2015)**

Dispositifs d'interconnexion et composants passifs  
fibroniques - Filtres fibroniques - Spécification générique  
(IEC 61977:2015)

Lichtwellenleiter - Verbindungselemente und passive  
Bauteile - Lichtwellenleiterfilter - Fachgrundspezifikation  
(IEC 61977:2015)

This European Standard was approved by CENELEC on 2015-10-02. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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

**EN 61977:2015**

**European foreword**

The text of document 86B/3861/CDV, future edition 3 of IEC 61977, 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 61977:2015.

The following dates are fixed:

- latest date by which the document has to be implemented at (dop) 2016-07-02  
national level by publication of an identical national  
standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2016-10-02  
the document have to be withdrawn

This document supersedes EN 61977:2010.

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

IEC 60068	NOTE	Harmonized in EN 60068 series.
IEC 61754	NOTE	Harmonized in EN 61754 series.
IEC 61978-1	NOTE	Harmonized as EN 61978-1.
IEC 62005	NOTE	Harmonized in EN 62005 series.

## 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 60027	series	Letter symbols to be used in electrical technology	-	-
IEC 60050-731	-	International Electrotechnical Vocabulary - Chapter 731: Optical fibre communication	-	-
IEC 60617	series	Graphical symbols for diagrams	-	-
IEC 60695-11-5	-	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus, confirmatory test arrangement and guidance	EN 60695-11-5	-
IEC 60825	series	Safety of laser products	EN 60825	series
IEC 61300	series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures	EN 61300	series
IEC/TR 61930	-	Fibre optic graphical symbology	-	-
ISO 129-1	-	Technical drawings - Indication of dimensions and tolerances - Part 1: General principles	-	-
ISO 286-1	-	Geometrical product specifications (GPS) - ISO code system for tolerances on linear sizes - Part 1: Basis of tolerances, deviations and fits	EN ISO 286-1	-
ISO 1101	-	Geometrical product specifications (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out	EN ISO 1101	-
ISO 8601	-	Data elements and interchange formats - Information interchange - Representation of dates and times	-	-

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**IEC 61977**

Edition 3.0 2015-08

# **INTERNATIONAL STANDARD**

## **NORME INTERNATIONALE**

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**Fibre optic interconnecting devices and passive components – Fibre optic filters –  
Generic specification**

**Dispositifs d'interconnexion et composants passifs fibroniques – Filtres  
fibroniques – Spécification générique**





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**IEC 61977**

Edition 3.0 2015-08

# **INTERNATIONAL STANDARD**

## **NORME INTERNATIONALE**

---

**Fibre optic interconnecting devices and passive components – Fibre optic filters –  
Generic specification**

**Dispositifs d'interconnexion et composants passifs fibroniques – Filtres  
fibroniques – Spécification générique**

INTERNATIONAL  
ELECTROTECHNICAL  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### **FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC FILTERS – GENERIC SPECIFICATION**

#### FOREWORD

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International Standard IEC 61977 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This third edition cancels and replaces the second edition published in 2010. It constitutes a technical revision.

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

- a) harmonization of a number of terms and definitions with other generic specifications;
- b) deletion of the quality assessment level clause.

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

CDV	Report on voting
86B/3861/CDV	86B/3917/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.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

## **FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC FILTERS – GENERIC SPECIFICATION**

### **1 Scope**

This International Standard applies to the family of fibre optic filters. These components have all of the following general features:

- they are passive for the reason that they contain no optoelectronic or other transducing elements which can process the optical signal launched into the input port;
- they modify the spectral intensity distribution in order to select some wavelengths and inhibit others;
- they are fixed, i.e. the modification of the spectral intensity distribution is fixed and cannot be tuned;
- they have input and output ports or a common port (having both functions of input and output) for the transmission of optical power; the ports are optical fibre or optical fibre connectors;
- they differ according to their characteristics. They can be divided into the following categories:
  - short-wave pass (only wavelengths lower than or equal to a specified value are passed);
  - long-wave pass (only wavelengths greater than or equal to a specified value are passed);
  - band-pass (only an optical window is allowed);
  - notch (only an optical window is inhibited).

It is also possible to have a combination of the above categories.

This standard establishes uniform requirements for the following:

- optical, mechanical and environmental properties.

### **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 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60050-731, *International Electrotechnical Vocabulary – Chapter 731: Optical fibre communication* (available at <http://www.electropedia.org>)

IEC 60617 (all parts), *Graphical symbols for diagrams* (available at <http://std.iec.ch/iec60617>)

IEC 60695-11-5, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

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