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STN	**Optovláknové spájacie prvky a pasívne súčiastky Nepremenné optovláknové filtre Kmeňová špecifikácia**	**STN EN IEC 61977 35 9278**

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

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. 08/20

Obsahuje: EN IEC 61977:2020, IEC 61977:2020

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 61977

May 2020

ICS 33.180.20

Supersedes EN 61977:2015 and all of its amendments and corrigenda (if any)

English Version

Fibre optic interconnecting devices and passive components - Fibre optic fixed filters - Generic specification (IEC 61977:2020)

Dispositifs d'interconnexion et composants passifs fibroniques - Filtres fibroniques fixes - Spécification générique (IEC 61977:2020)

Lichtwellenleiter - Verbindungselemente und passive Bauteile - Feste Lichtwellenleiterfilter - Fachgrundspezifikation (IEC 61977:2020)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 61977:2020 (E)

European foreword

The text of document 86B/4267/FDIS, future edition 4 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 IEC 61977:2020.

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) 2021-02-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-14

This document supersedes EN 61977:2015 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61977:2020 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 60027 (series)	NOTE	Harmonized as EN 60027 (series)
IEC 60825 (series)	NOTE	Harmonized as EN 60825 (series)
IEC 61300 (series)	NOTE	Harmonized as EN 61300 (series)
ISO 129-1	NOTE	Harmonized as EN ISO 129-1
ISO 286-1	NOTE	Harmonized as EN ISO 286-1
ISO 1101	NOTE	Harmonized as EN ISO 1101

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where 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.

Publication	Year	Title	EN/HD	Year
IEC 60027	series	Letters symbols to be used in electrical technology	-	-
IEC 60050-731	-	International Electrotechnical Vocabulary - Chapter 731: Optical fibre communication	-	-
IEC 60617	-	Standard data element types with associated classification scheme for electric components - Part 4: IEC reference collection fo standard data element types and component classes	-	-
IEC 60825	series	Safety of laser products	-	-
IEC 61300	series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures	-	-
IEC/TR 61930	-	Fibre optic graphical symbology	-	-
IEC/TS 62627-09	-	Fibre optic interconnecting devices and passive components - Vocabulary for passive optical devices	-	-
ISO 129-1	-	Technical product documentation (TPD) - Presentation of dimensions and tolerances - Part 1: General principles	EN ISO 129-1	-
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 8601-1	-	Date and time - Representations for information interchange - Part 1: Basic rules	-	-

IEC 61977

Edition 4.0 2020-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

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

IEC 61977:2020-04(en-fr)

IEC 61977

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC FIXED FILTERS – GENERIC SPECIFICATION

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61977 has been prepared by subcommittee SC 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee TC 86: Fibre optics.

This fourth edition cancels and replaces the third edition published in 2015. This edition constitutes a technical revision.

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

a) change of the title and the scope for the limitation to fibre optic fixed filters;
b) addition of new terms and definitions reflecting new title;
c) removal of terms and definitions duplicated in IEC TS 62627-09;
d) harmonization of the vertical axis of Figures 1 to 5;
e) restructuration of Clause 4 reflecting the latest technical and market situation.

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

FDIS	Report on voting
86B/4267/FDIS	86B/4286/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

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

INTRODUCTION

There are two generic specifications for fibre optic filters: fibre optic fixed filters and fibre optic tuneable filters. This document focuses on fibre optic fixed filters. Fibre optic tuneable bandpass filter is standardized in IEC 63032.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC FIXED FILTERS – GENERIC SPECIFICATION

1 Scope

This document 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);
  - gain flattening (compensating the spectral profile of the device).

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

This document provides the generic information including terminology of IEC 61753-04x series documents. Published IEC 61753-04x series documents are listed in the Bibliography.

This document establishes uniform requirements for optical, mechanical and environmental properties.

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

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

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

IEC 60825 (all parts), *Safety of laser products*

IEC 61300 (all parts), *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*

IEC TR 61930, *Fibre optic graphical symbology*

IEC TS 62627-09, *Fibre optic interconnecting devices and passive components – Vocabulary for passive optical devices*

ISO 129-1, *Technical product documentation (TPD) – Presentation 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*

ISO 1101, *Geometrical product specifications (GPS) – Geometrical tolerancing – Tolerances of form, orientation, location and run-out*

ISO 8601-1, *Date and time – Representations for information interchange – Part 1: Basic rules*