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**Filtri optičnih vlaken – Splošne specifikacije (IEC 61977:2001)\***

Fibre optic filters - Generic specification (IEC 61977:2001)

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EUROPEAN STANDARD

**EN 61977**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2002

ICS 33.180.20

English version

**Fibre optic filters –  
Generic specification  
(IEC 61977:2001)**

Filtres à fibres optiques –  
Spécification générique  
(CEI 61977:2001)

Lichtwellenleiterfilter -  
Fachgrundspezifikation  
(IEC 61977:2001)

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This European Standard was approved by CENELEC on 2002-03-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 86B/1603/FDIS, future edition 1 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 was approved by CENELEC as EN 61977 on 2002-03-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2002-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-03-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61977:2001 was approved by CENELEC as a European Standard without any modification.

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**Annex ZA**  
(normative)

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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IECQ 001001	2000	IEC Quality Assessment System for Electronic Components (IECQ) - Basic Rules	-	-
IECQ 001002	Series	IEC Quality Assessment System for Electronic Components (IECQ) - Rules of Procedure	-	-
IEC 60027	Series	Letter symbols to be used in electrical technology	HD 245	Series
IEC 60050-731	1991	International Electrotechnical Vocabulary (IEV) Chapter 731: Optical fibre communication	-	-
IEC 60410	1973	Sampling plans and procedures for inspection by attributes	-	-
IEC 60617	Series	Graphical symbols for diagrams	EN 60617	Series
IEC 60695-2-2	1991	Fire hazard testing Part 2: Test methods - Section 2: Needle-flame test	EN 60695-2-2	1994
IEC 60825-1	1993	Safety of laser products Part 1: Equipment classification, requirements and user's guide	EN 60825-1 + corr. February + A11	1994 1995 1996
IEC 61300	Series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures	EN 61300	Series
ISO 129	1985	Technical drawings - Dimensioning - General principles, definitions, methods of execution and special indications	-	-
ISO 286-1	1988	ISO system of limits and fits Part 1: Bases of tolerances, deviations and fit	EN 20286-1	1993

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 1101	1983	Technical drawings - Geometrical tolerancing - Tolerancing of form, orientation, location and run-out - Generalities, definitions, symbols, indications on drawings	-	-
ISO 8601	2000	Data elements and interchange formats - Information interchange - Representation of dates and times	-	-

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# INTERNATIONAL STANDARD

# IEC 61977

QC 840000

First edition  
2001-12

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## Fibre optic filters – Generic specification

*Filtres à fibres optiques –  
Spécification générique*  
**STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 61977:2004

<https://standards.iteh.ai/catalog/standards/sist/7a622c9b-6ed9-4e3f-9716-9a603608b023/sist-en-61977-2004>

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

PRICE CODE

**S**

*For price, see current catalogue*

## CONTENTS

FOREWORD.....	3
INTRODUCTION.....	4
1 Scope.....	5
2 Normative references .....	5
3 Definitions .....	6
4 Requirements .....	8
4.1 Classification.....	8
4.2 Documentation .....	11
4.3 Standardisation system .....	14
4.4 Design and construction .....	16
4.5 Quality.....	16
4.6 Performance requirements .....	16
4.7 Identification and marking.....	16
4.8 Packaging .....	17
4.9 Storage conditions.....	17
4.10 Safety.....	18
5 Quality assessment procedures.....	18
5.1 Primary stage of manufacture.....	18
5.2 Structurally similar components.....	18
5.3 Qualification approval procedures.....	18
5.4 Quality conformance inspection.....	20
5.5 Certified record of released lots.....	21
5.6 Delayed deliveries .....	22
5.7 Delivery release before completion of group B tests .....	22
5.8 Alternative test methods .....	22
5.9 Unchecked parameters.....	22
Table 1 – The IEC specification structure.....	12
Table 2 – Standards interlink matrix.....	16
Table 3 – Quality assurance options .....	16



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**FIBRE OPTIC FILTERS –  
Generic specification**
**FOREWORD**

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61977 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/1603/FDIS	86B/1637/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 3.

The QC number that appears on the front cover of this publication is the specification number in the IEC Quality Assessment System for Electronic Components (IECQ).

The committee has decided that the contents of this publication will remain unchanged until 2008. At this date, the publication will be

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

## INTRODUCTION

This standard is divided into three elements.

The first element, made up of clauses 1 to 3, contains general information which pertains to this standard.

The second element, consisting of clause 4, Requirements, contains all requirements which should be met by fibre optic filters covered by this standard. Requirements for classification, the IEC specification system, documentation, materials, workmanship, quality, performance, identification, and packaging are covered.

The third element, composed of clause 5, Quality assessment procedures, contains all of the procedures which must be followed for proper quality assessment of products covered by this standard.

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## FIBRE OPTIC FILTERS –

### Generic specification

#### 1 Scope

IEC 61977 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 can not be tuned;
- they have a maximum of two ports 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;
- measurement and test procedures for quality assessment.

#### 2 Normative references

The following referenced documents are indispensable for the application 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.

IECQ 001001:2000, *IEC Quality Assessment System for Electronic Components (IECQ) – Basic Rules*

IECQ 001002 (all parts), *IEC Quality Assessment System for Electronic Components (IECQ) – Rules of Procedure*

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

IEC 60050(731):1991, *International Electrotechnical Vocabulary – Chapter 731: Optical fibre communication*

IEC 60410:1973, *Sampling plans and procedures for inspection by attributes*

IEC 60617 (all parts), *Graphical symbols for diagrams*