

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**





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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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- withdrawn,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*

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