

# INTERNATIONAL STANDARD

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**Fibre optic interconnecting devices and passive components - Basic test and measurement procedures -  
Part 3-50: Examinations and measurements - Crosstalk for optical spatial switches**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Fibre optic interconnecting devices and passive components -  
Basic test and measurement procedures -  
Part 3-50: Examinations and measurements -  
Crosstalk for optical spatial switches**

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 61300-3-50:2013. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 61300-3-50 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics. It is an International Standard.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

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

- a) revising structure of the document.

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

Draft	Report on voting
86B/5129/FDIS	86B/5166/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts in the IEC 61300 series, published under the general title, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures* can be found on the IEC website.

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

- reconfirmed,
- withdrawn, or
- revised.

## 1 Scope

This part of IEC 61300 describes the procedure to measure the crosstalk of optical signals between the ports of a multiport  $M \times N$  ( $M$  input ports and  $N$  output ports) fibre optic spatial switch. ~~The crosstalk is defined as the ratio of the optical power at an output port which comes from the unconnected input port, to the optical power at the output port which comes from the connected input port.~~

## 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 60876-1, *Fibre optic interconnecting devices and passive components - Fibre optic spatial switches - Part 1: Generic specification*

IEC 61300-1, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 1: General and guidance*

IEC 61300-3-2, *Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-2: Examinations and measurements - Polarization dependent loss in a single-mode fibre optic device*

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

## 3 Terms, definitions and abbreviated terms

### 3.1 Terms and definitions

IEC 61300-3-50:2025

For the purposes of this document, the terms and definitions given in IEC 60876-1, IEC 61300-1, IEC TS 62627-09 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

#### 3.1.1

##### **crosstalk**

ratio of the optical power at an output port which comes from the unconnected input port to the optical power at the output port which comes from the connected input port