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INTERNATIONAL STANDARD

Optical fibres –
Part 1-61: Measurement methods and test procedures – Polarization crosstalk

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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OPTICAL FIBRES –

Part 1-61: Measurement methods and test procedures – Polarization crosstalk

FOREWORD

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International Standard IEC 60793-1-61 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

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

CDV	Report on voting
86A/1739/CDV	86A/1781/RVC

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.

A list of all parts in the IEC 60793 series, published under the general title *Optical fibres*, 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 "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- withdrawn,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.

A bilingual version of this publication may be issued at a later date.

OPTICAL FIBRES –

Part 1-61: Measurement methods and test procedures – Polarization crosstalk

1 Scope

This part of IEC 60793 establishes uniform requirements for measuring the polarization crosstalk of polarization-maintaining (PM) fibres.

This document gives two methods for measuring the polarization crosstalk of PM fibres. Method A is the power ratio method, which uses the maximum and minimum values of output power at a specified wavelength, and Method B is the in-line method, which uses an analysis of the Poincaré sphere.

Details of each method are described in Clause 6.

Crosstalk values obtained by Methods A and B are based on different definitions.

The crosstalk measured by Method A is defined as an "averaged" value over a measured wavelength range. In contrast, the crosstalk value obtained from Method B shows the "worst case" crosstalk value.

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 60793-1-1, *Optical fibres – Part 1-1: Measurement methods and test procedures – General and guidance*

IEC 60793-2-70[1], *Optical fibres – Part 2-70: Product specifications – Sectional specifications for polarization-maintaining fibres*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60793-1-1 apply.

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

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

4 Test conditions

Unless otherwise specified, the test shall be conducted under the standard conditions specified in IEC 60068-1. However, when it is difficult to make measurements under the standard conditions, the test may be conducted under conditions other than the standard conditions, provided that no doubts will arise about judgments.

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1 Under preparation. Stage at the time of publication: IEC CCDV 60793-2-70:2017.