TECHNICAL REPORT

IEC TR 61292-5

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Optical amplifiers –

Part 5:
Polarization mode dispersion parameter – General information

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FOREWORD

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The main task of IEC technical committees is to prepare International Standards. However, a technical committee may propose the publication of a Technical Report when it has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

IEC 61292-5, which is a Technical Report, has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

The text of this Technical Report is based on the following documents:

Enquiry draft	Report on voting
86C/579A/DTR	86C/608/RVC

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

IEC 61292 consists of the following parts, under the new general title *Optical amplifiers:*

Part 1: Parameters of amplifier components

Part 2: Theoretical background for noise figure evaluation using the electrical spectrum analyzer

Part 3: Classification, characteristics and applications.

Part 4: Maximum permissible optical power for the damage-free and safe use of optical amplifiers, including Raman amplifiers[1)]

Part 5: Polarization mode dispersion parameter – General information

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

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 maintenance result date indicated on the IEC web site 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- withdrawn;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.

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

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1) To be published.

OPTICAL AMPLIFIERS –

Part 5: Polarization mode dispersion parameter – General information

1 Scope

This part of IEC 61292, which is a Technical Report, applies to all commercially available optical amplifiers (OAs) including those using fibres (OFAs), semiconductors (SOAs), and waveguides (POWA), as classified in IEC 61292-3.

This Technical Report presents general information about polarization mode dispersion (PMD), related to the application of the two commonly used methods to test PMD in OAs, the Jones matrix eigenanalysis (JME) and the Poincaré sphere analysis (PSA), which have been demonstrated to be formalistically equivalent [4,5][2)].

This report is complementary to the International Standards describing the JME procedure (IEC 61290-11-1) and the PSA procedure (IEC 61290-11-2).

2 Normative references

The following referenced documents are indispensable for the understanding 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 61290-11-1, *Optical amplifier test methods – Part 11-1: Polarization mode dispersion – Jones matrix eigenanalysis method (JME)*

IEC 61290-11-2, *Optical fibre amplifier test methods – Part 11-2: Polarization mode dispersion – Poincaré sphere analysis method* [3)]

IEC 61292-3, *Optical amplifiers – Part 3: Classification, characteristics and applications*

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2) Numbers in brackets refer to the Bibliography.

3) To be published.