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Irish Standard
I.S. EN 62572-3:2016

Fibre optic active components and devices - Reliability standards - Part 3: Laser modules used for telecommunication

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National Foreword

I.S. EN 62572-3:2016 is the adopted Irish version of the European Document EN 62572-3:2016, Fibre optic active components and devices - Reliability standards - Part 3: Laser modules used for telecommunication

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62572-3

June 2016

ICS 31.260; 33.180

Supersedes EN 62572-3:2014

English Version

Fibre optic active components and devices - Reliability standards - Part 3: Laser modules used for telecommunication (IEC 62572-3:2016)

Composants et dispositifs actifs en fibres optiques - Normes de fiabilité - Partie 3: Modules laser utilisés pour les télécommunications (IEC 62572-3:2016)

Aktive Lichtwellenleiterbauelemente und -geräte - Zuverlässigkeitsnormen - Teil 3: Lasermodule für Telekommunikationsanwendungen (IEC 62572-3:2016)

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European foreword

The text of document 86C/1302/CDV, future edition 3 of IEC 62572-3, prepared by SC 86C "Fibre optic systems and active devices" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62572-3:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-12-24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-03-24

This standard supersedes EN 62572-3:2014. It constitutes a technical revision in which errors in Table 1 and Table 2 have been corrected.

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-1	-	Environmental testing -- Part 2-1: Tests - Test A: Cold	EN 60068-2-1	-
IEC 60068-2-14	-	Environmental testing -- Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	-
IEC 60749-6	-	Semiconductor devices - Mechanical and climatic test methods -- Part 6: Storage at high temperature	EN 60749-6	-
IEC 60749-8	-	Semiconductor devices – Mechanical and climatic test methods – Part 8: Sealing	EN 60749-8	-
IEC 60749-10	-	Semiconductor devices - Mechanical and climatic test methods -- Part 10: Mechanical shock	EN 60749-10	-
IEC 60749-11	-	Semiconductor devices - Mechanical and climatic test methods -- Part 11: Rapid change of temperature - Two-fluid-bath method	EN 60749-11	-
IEC 60749-12	-	Semiconductor devices - Mechanical and climatic test methods -- Part 12: Vibration, variable frequency	EN 60749-12	-
IEC 60749-25	-	Semiconductor devices - Mechanical and climatic test methods -- Part 25: Temperature cycling	EN 60749-25	-
IEC 60749-26	-	Semiconductor devices - Mechanical and climatic test methods -- Part 26: Electrostatic discharge (ESD) sensitivity testing - Human body model (HBM)	EN 60749-26	-
IEC/TR 62572-2	-	Fibre optic active components and devices-- - Reliability standards - Part 2: Laser module degradation	-	-
MIL-STD-883	-	Test method standard – Microcircuits	-	-

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IEC 62572-3

Edition 3.0 2016-02

INTERNATIONAL STANDARD

Fibre optic active components and devices – Reliability standards – Part 3: Laser modules used for telecommunication

IEC 62572-3:2016-02(en)

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IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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INTERNATIONAL STANDARD

Fibre optic active components and devices – Reliability standards – Part 3: Laser modules used for telecommunication

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FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES – RELIABILITY STANDARDS –

Part 3: Laser modules used for telecommunication

FOREWORD

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International Standard IEC 62572-3 has been prepared by subcommittee 86C: Fibre optic systems and active devices of IEC technical committee 86: Fibre optics.

This third edition cancels and replaces the second edition published in 2014. This third edition constitutes a technical revision in which errors in Table 1 and Table 2 have been corrected.

The text of this standard is based on the following documents:

CDV	Report on voting
86C/1302/CDV	86C/1345/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.

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This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62572 series, published under the general title *Fibre optic active components and devices – Reliability standards*, can be found on the IEC website.

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.

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

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INTRODUCTION

The laser modules covered by this International Standard are purchased by system suppliers (SS) to be inserted in equipment, which in turn are supplied/sold to a system operator (SO) or a network operator (see definitions in Clause 3).

For the system operator to act as an informed buyer, he/she should have knowledge of the potential risks posed by the use of critical components.

Optoelectronic component technology is continuing to develop. Consequently, during product development phases, many failure mechanisms in laser modules have been identified. These failure mechanisms, if undetected, could result in very short laser lifetime in system use.

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FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES – RELIABILITY STANDARDS –

Part 3: Laser modules used for telecommunication

1 Scope

This part of IEC 62572 deals with reliability assessment of laser modules used for telecommunication.

The aim of this standard is

– to establish a standard method of assessing the reliability of laser modules in order to minimize risks and to promote product development and reliability;
– to establish means by which the distribution of failures with time can be determined. This should enable the determination of equipment failure rates for specified end of life criteria.

In addition, guidance is given in IEC TR 62572-2.

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 60068-2-1, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-14, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60749-6, *Semiconductor devices – Mechanical and climatic test methods – Part 6: Storage at high temperature*

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IEC 60749-25, *Semiconductor devices – Mechanical and climatic test methods – Part 25: Temperature cycling*

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