



NSAI
Standards

Irish Standard
I.S. EN 62149-1:2012

Fibre optic active components and devices - Performance standards -- Part 1: General and guidance (IEC 61753-059-2:201X (86B/3338/CDV) (EQV) + IEC 62149-1:2011 (EQV))

I.S. EN 62149-1:2012

Incorporating amendments/corrigenda issued since publication:

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EUROPEAN STANDARD
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EN 62149-1

February 2012

ICS 33.180.01

Supersedes EN 62149-1:2004

English version

**Fibre optic active components and devices -
Performance standards -
Part 1: General and guidance
(IEC 62149-1:2011)**

Composants et dispositifs actifs à fibres
optiques -
Normes de performances -
Partie 1: Généralités et lignes directrices
(CEI 62149-1:2011)

Aktive Lichtwellenleiterbauelemente und -
geräte -
Betriebsverhaltensnormen -
Teil 1: Allgemeines und Leitfaden
(IEC 62149-1:2011)

This European Standard was approved by CENELEC on 2012-01-11. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 86C/1016/CDV, future edition 2 of IEC 62149-1, 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 62149-1:2012.

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) 2012-10-11
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-01-11

This document supersedes EN 62149-1:2004.

EN 62149-1:2012 includes the following significant technical changes with respect to EN 62149-1:2004: The technical change consists of an update in Table A.1.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62149-1:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61300 series	NOTE	Harmonized in EN 61300 series (not modified).
IEC 61751	NOTE	Harmonized as EN 61751.
IEC 62005 series	NOTE	Harmonized in EN 62005 series (not modified).

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-27	-	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	-
IEC 61300-2-1	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-1: Tests - Vibration (sinusoidal)	EN 61300-2-1	-
IEC 61300-2-4	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-4: Tests - Fibre/cable retention	EN 61300-2-4	-
IEC 61300-2-5	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-5: Tests - Torsion	EN 61300-2-5	-
IEC 61300-2-9	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-9: Tests - Shock	EN 61300-2-9	-
IEC 61300-2-17	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-17: Tests - Cold	EN 61300-2-17	-
IEC 61300-2-18	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-18: Tests - Dry heat - High temperature endurance	EN 61300-2-18	-
IEC 61300-2-19	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-19: Tests - Damp heat (steady state)	EN 61300-2-19	-
IEC 61300-2-21	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-21: Tests - Composite temperature/humidity cyclic test	EN 61300-2-21	-
IEC 61300-2-22	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-22: Tests - Change of temperature	EN 61300-2-22	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61300-2-26	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-26: Tests - Salt mist	EN 61300-2-26	-
IEC 61300-2-27	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-27: Tests - Dust - Laminar flow	EN 61300-2-27	-
IEC 61300-2-28	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-28: Tests - Industrial atmosphere (sulphur dioxide)	EN 61300-2-28	-
IEC 61300-2-42	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-42: Tests - Static side load for connectors	EN 61300-2-42	-
IEC 61300-2-44	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-44: Tests - Flexing of the strain relief of fibre optic devices	EN 61300-2-44	-
IEC 61300-2-45	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-45: Tests - Durability test by water immersion	EN 61300-2-45	-
IEC 61300-2-46	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-46: Tests - Damp heat cyclic	EN 61300-2-46	-
IEC 61300-2-48	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-48: Tests - Temperature-humidity cycling	EN 61300-2-48	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES –
PERFORMANCE STANDARDS –**
Part 1: General and guidance

FOREWORD

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International Standard IEC 62149-1 has been prepared by subcommittee SC 86C: Fibre optic systems and active devices of IEC technical committee TC 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2004 and its corrigendum 1 (2004). It is a technical revision. The technical change consists of an update in Table A.1.

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

CDV	Report on voting
86C/1016/CDV	86C/1037A/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 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.

INTRODUCTION

Performance standards define standard electro-optical performance under a set of prescribed conditions and contain a series or a set of tests and measurements (which may or may not be grouped into a specific schedule) with clearly defined conditions, severities and pass/fail criteria. The tests are intended to be run on as an initial design verification to prove the product's ability to satisfy the requirements of a specific application, market sector or user group.

The subsequent parts of this document contain those sets of performance criteria that have been standardised for international use. A product that has been shown to meet all the requirements of a performance standard may be declared as complying with that performance standard.

Products from one manufacturer that are tested to a performance standard will operate together within the bounds of the criteria set by the performance standard. There is however no guarantee that products from different suppliers having the same standard interface, which have been independently tested to a performance standard, will meet the same levels of optical performance when mated together as those supplied by one manufacturer.

Compliance with a performance standard demonstrates that a product has in essence passed a design verification test, it is not a guarantee of lifetime assured performance nor reliability. Both service life tests and reliability testing must be the subject of a separate test schedule where the tests and severities selected are such that they are truly representative of the requirements of these test programmes. Consistency of manufacture should be maintained using a recognised quality assurance programme while the reliability of the product should be evaluated using the procedures recommended in IEC 62005 and IEC 61751.

Where possible, tests and measurements should be selected from IEC 61300. Where this is not possible, the required test method shall be attached as an annex to the performance standard.

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