
**Aktivne komponente in naprave optičnih vlaken – Izvedbeni standardi – 3. del
3: laserski diodni oddajniki z integriranim 2,5 Gbit/s modulatorjem (IEC 62149-
3:2004)***

Fibre optic active components and devices - Performance standards - Part 3: 2,5
Gbit/s modulator-integrated laser diode transmitters (IEC 62149-3:2004)

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EUROPEAN STANDARD

EN 62149-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2004

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**Fibre optic active components and devices –
Performance standards
Part 3: 2,5 Gbit/s modulator-integrated laser diode transmitters
(IEC 62149-3:2004)**

Composants et dispositifs actifs
à fibres optiques –
Normes de fonctionnement
Partie 3: Emetteurs à diode laser
à modulateur 2,5 Gbit/s intégré
(CEI 62149-3:2004)

Aktive Lichtwellenleiterbauelemente
und -geräte –
Betriebsverhaltensnorm
Teil 3: Laserdiodensender mit integriertem
2,5 Gbit/s Modulator
(IEC 62149-3:2004)

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 86C/575/FDIS, future edition 1 of IEC 62149-3, 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 was approved by CENELEC as EN 62149-3 on 2004-03-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2004-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62149-3:2004 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 60068	NOTE	Harmonized in EN 60068 series (not modified).
IEC 60793	NOTE	Harmonized in EN 60793 series (partly modified).
IEC 60825	NOTE	Harmonized in EN 60825 series (not modified)
IEC 60874	NOTE	Harmonized in EN 60874 series (not modified).
IEC 61751	NOTE	Harmonized as EN 61751:1998 (not modified).
IEC 61280	NOTE	Harmonized in EN 61280 series (not modified).

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

The following referenced documents are indispensable for the application 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.

NOTE Where 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 60068-2-1	- ¹⁾	Environmental testing Part 2: Tests - Tests A: Cold	EN 60068-2-1	1993 ²⁾
IEC 60068-2-2	- ¹⁾	Part 2: Tests - Tests B: Dry heat	EN 60068-2-2	1993 ²⁾
IEC 60068-2-6	- ¹⁾	Part 2: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	1995 ²⁾
IEC 60068-2-14	- ¹⁾	Part 2: Tests - Test N: Change of temperature	EN 60068-2-14	1999 ²⁾
IEC 60068-2-27	- ¹⁾	Part 2: Tests - Test Ea and guidance: Shock	EN 60068-2-27	1993 ²⁾
IEC 60068-2-78	- ¹⁾	Part 2-78: Tests - Test Ca: Damp heat, steady state	EN 60068-2-78	2001 ²⁾
IEC 60747-12-2	- ¹⁾	Semiconductor devices Part 12: Optoelectronic devices – Section 2: Blank detail specification for laser diode modules with pigtail for fibre optic systems and sub-systems	-	-
IEC 60749-7	- ¹⁾	Semiconductor devices - Mechanical and climatic test methods Part 7: Internal moisture content measurement and the analysis of other residual gases	EN 60749-7	2002 ²⁾
IEC 60825-1	- ¹⁾	Safety of laser products Part 1: Equipment classification, requirements and user's guide	EN 60825-1	1994 ²⁾
IEC 60950-1 (mod)	- ¹⁾	Information technology equipment - Safety Part 1: General requirements	EN 60950-1	2001 ²⁾

1) Undated reference.

2) Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62007-1	- ¹⁾	Semiconductor optoelectronic devices for fibre optic system applications Part 1: Essential ratings and characteristics	EN 62007-1	2000 ²⁾
IEC/PAS 62179	- ¹⁾	Electrostatic discharge (ESD) sensitivity testing human body model (HBM)	-	-
ITU-T G.694-1	- ¹⁾	Spectral grids for WDM applications: DWDM frequency grid	-	-

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**NORME
INTERNATIONALE
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**CEI
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62149-3

Première édition
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**Composants et dispositifs actifs
à fibres optiques –
Normes de fonctionnement –**

**Partie 3:
Emetteurs à diode laser
à modulateur 2,5 Gbit/s intégré**

**Fibre optic active components
and devices –
Performance standards –**

**Part 3:
2,5 Gbit/s modulator-integrated
laser diode transmitters**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES –
PERFORMANCE STANDARDS –**
**Part 3: 2,5 Gbit/s modulator-integrated
laser diode transmitters**

FOREWORD

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International Standard IEC 62149-3 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics

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

FDIS	Report on voting
86C/575/FDIS	86C/584/RVD

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.

This standard constitutes Part 3 of the IEC 62149 series, published under the general title *Fibre optic active components and devices – Performance standards*. This series consists of Part 1, devoted to general requirements, and various additional parts, specific to individual module families.

Part 1: General and guidance

Part 2: Discrete vertical cavity surface emitting laser devices

Part 3: 2,5 Gbit/s modulator-integrated laser diode transmitters

Part 4: 1300-nm transceivers for Gigabit Ethernet application

Part 5: ATM-PON transceivers with LD driver circuits and CDR ICs

Part 6: 650-nm 250-Mbit/s plastic optical fibre transceivers

The committee has decided that the contents of this publication will remain unchanged until 2010. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
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INTRODUCTION

Fibre optic transmitters are used to convert electrical signals into optical signals. This specification covers the performance standard for 2,5 Gbit/s modulator-integrated laser diode transmitters for up to 2,5 Gbit/s multi-channel optical telecommunication applications at 1 550 nm.

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