

# SLOVENSKI STANDARD

## SIST EN 62007-1:2009

01-april-2009

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SIST EN 62007-1:2002

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Semiconductor optoelectronic devices for fibre optic system applications - Part 1:  
Specification template for essential ratings and characteristics (IEC 62007-1:2008)

### iTeh STANDARD PREVIEW

Optoelektronische Halbleiterbauelemente für Anwendungen in Lichtwellenleitersystemen  
- Teil 1: Vorlage für Leistungsspezifikationen für wesentliche Grenz- und Kennwerte (IEC  
62007-1:2008)

[SIST EN 62007-1:2009](https://standards.iteh.ai/catalog/standards/sist/96fd789c-9ca1-4d08-9d56-b15e0747-2b64/sist-en-62007-1-2009)

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Dispositifs optoélectroniques à semiconducteurs pour application dans les systèmes à  
fibres optiques - Partie 1: Modèle de spécification relatif aux valeurs et caractéristiques  
essentielles (CEI 62007-1:2008)

**Ta slovenski standard je istoveten z: EN 62007-1:2009**

#### ICS:

31.080.01	Polprevodniški elementi (naprave) na splošno	Semiconductor devices in general
31.260	Optoelektronika, laserska oprema	Optoelectronics. Laser equipment
33.180.01	Ūā c{ ā Ā ] cā } ā ā c æ } ā æ • ]    z ] [	Fibre optic systems in general

**SIST EN 62007-1:2009**

**en,fr**

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**Semiconductor optoelectronic devices  
for fibre optic system applications -  
Part 1: Specification template for essential ratings and characteristics  
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Dispositifs optoélectroniques  
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Optoelektronische Halbleiterbauelemente  
für Anwendungen  
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für Leistungsspezifikationen  
für wesentliche Grenz- und Kennwerte  
(IEC 62007-1:2008)

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SIST EN 62007-1:2009  
This European Standard was approved by CENELEC on 2008-12-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

**CENELEC**

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

**Central Secretariat: avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 86C/849/FDIS, future edition 2 of IEC 62007-1, 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 was approved by CENELEC as EN 62007-1 on 2008-12-01.

This European Standard supersedes EN 62007-1:2000.

EN 62007-1:2009 includes the following significant technical changes with respect to EN 62007-1:2000.

- the title has been changed to indicate that this is a template;
- the definitions of some symbols and terms in EN 62007-1:2000 are revised in order to harmonize them with those in other SC 86C documents. A dated part in EN 62007-1:2000 is removed and the other dated parts are updated.

NOTE The field of this standard will henceforth be placed under the responsibility of IEC technical committee 86: Fibre optics.

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) 2009-09-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2011-12-01

Annex ZA has been added by CENELEC.

**Endorsement notice**  
<https://standards.iteh.ai/catalog/standards/sist/9ca1-4d08-9d56-bd5a07d3c3b6/sist-en-62007-1-2009>

The text of the International Standard IEC 62007-1:2008 was approved by CENELEC as a European Standard without any modification.

## **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 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 60747-5-1	- <sup>1)</sup>	Discrete semiconductor devices and integrated circuits - Part 5-1: Optoelectronic devices - General	EN 60747-5-1	2001 <sup>2)</sup>
IEC 60825	Series	Safety of laser products	EN 60825	Series

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<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

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IEC 62007-1

Edition 2.0 2008-10

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

semiconductor optoelectronic devices for fibre optic system applications –  
Part 1: Specification template for essential ratings and characteristics

Dispositifs optoélectroniques à semiconducteurs pour application dans les  
systèmes à fibres optiques –  
Partie 1: Modèle de spécification relatif aux valeurs et caractéristiques  
essentielles

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# SEMICONDUCTOR OPTOELECTRONIC DEVICES FOR FIBRE OPTIC SYSTEM APPLICATIONS –

## Part 1: Specification template for essential ratings and characteristics

### FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
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International Standard IEC 62007-1 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 1997, and its Amendment 1 (1998). It is a technical revision.

This edition includes the following significant technical changes with respect to the previous edition.

- 1) The title has been changed to indicate that this is a template.
- 2) The definitions of some symbols and terms in IEC 62007-1 Ed.1 are revised in order to harmonize them with those in other SC 86C documents. A dated part in IEC 62007-1 ed.1 is removed and the other dated parts are updated.

NOTE The field of this standard will henceforth be placed under the responsibility of IEC technical committee 86: Fibre optics.

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

FDIS	Report on voting
86C/849/FDIS	86C/866/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.

A list of all parts of the IEC 62007 series can be found, under the general title *Semiconductor optoelectronic devices for fibre optic system applications*, on the IEC website.

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.

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## SEMICONDUCTOR OPTOELECTRONIC DEVICES FOR FIBRE OPTIC SYSTEM APPLICATIONS –

### Part 1: Specification template for essential ratings and characteristics

#### 1 Scope and object

This part of IEC 62007 is a specification template for essential ratings and characteristics of the following categories of semiconductor optoelectronic devices to be used in the field of fibre optic systems and subsystems:

- semiconductor photoemitters;
- semiconductor photoelectric detectors;
- monolithic or hybrid integrated optoelectronic devices and their modules.

The object of this performance specification template is to provide a frame for the preparation of detail specifications for the essential ratings and characteristics.

Detail specification writers may add specification parameters and/or groups of specification parameters for particular applications. However, detail specification writers may not remove specification parameters specified in this standard.

#### 2 Normative references

[SIST EN 62007-1:2009](https://standards.iteh.ai/catalog/standards/sist/96fd789c-9ca1-4d08-9d56-30ba0955043f/iec-62007-1-2009)

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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.

IEC 60825 (all parts), *Safety of laser products*

IEC 60747-5-1, *Discrete semiconductor devices and integrated circuits – Part 5-1: Optoelectronic devices – General*

#### 3 Terms, definitions and abbreviations

For the purposes of this document, the following terms, definitions and abbreviations apply, as well as terms and definitions concerning *physical concepts*, *types of devices*, *general terms*, and *ratings and characteristics* given in IEC 60747-5-1.

##### 3.1 Terms and definitions

###### 3.1.1

###### **PIN photodiode**

photodiode with a large intrinsic region sandwiched between p- and n-doped semiconducting regions used for the detection of optical radiation

NOTE Adapted from IEC 731-06-29, specialized