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Standards

Irish Standard
I.S. EN 62007-1:2015

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

I.S. EN 62007-1:2015

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EUROPEAN STANDARD

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NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2015

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Supersedes EN 62007-1:2009

English Version

**Semiconductor optoelectronic devices for fibre optic system
applications - Part 1: Specification template for essential ratings
and characteristics
(IEC 62007-1:2015)**

Dispositifs optoélectroniques à semiconducteurs pour
application dans les systèmes à fibres optiques - Partie 1:
Modèle de spécification relatif aux valeurs et
caractéristiques essentielles
(IEC 62007-1:2015)

Optoelektronische Halbleiterbauelemente für Anwendungen
in Lichtwellenleitersystemen - Teil 1: Vorlage für
Leistungsspezifikationen für wesentliche Grenz- und
Kennwerte
(IEC 62007-1:2015)

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 62007-1:2015

Foreword

The text of document 86C/1256/CDV, future edition 3 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 approved by CENELEC as EN 62007-1:2015.

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) 2016-02-04
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-05-04

This document supersedes EN 62007-1:2009.

EN 62007-1:2015 includes the following significant technical changes with respect to EN 62007-1:2009:

- 1) The definitions of some symbols and terms are revised in order to harmonize them with those in other SR 86C documents;
- 2) A clause on APD-TIA has been added.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60825	Series	Safety of laser products	EN 60825	Series
IEC 60747-5-1	-	Discrete semiconductor devices and integrated circuits - Part 5-1: Optoelectronic devices - General	EN 60747-5-1	-

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Edition 3.0 2015-03

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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IEC 62007-1

Edition 3.0 2015-03

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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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

SEMICONDUCTOR OPTOELECTRONIC DEVICES FOR FIBRE OPTIC SYSTEM APPLICATIONS –

Part 1: Specification template for essential ratings and characteristics

FOREWORD

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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 third edition cancels and replaces the second edition published in 2008. This edition constitutes a technical revision.

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

- 1) The definitions of some symbols and terms are revised in order to harmonize them with those in other SC 86C documents.
- 2) A clause on APD-TIA has been added.

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

CDV	Report on voting
86C/1256/CDV	86C/1283/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.

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

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- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

SEMICONDUCTOR OPTOELECTRONIC DEVICES FOR FIBRE OPTIC SYSTEM APPLICATIONS –

Part 1: Specification template for essential ratings and characteristics

1 Scope

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.

This part of IEC 62007 provides a frame for the preparation of detail specifications for the essential ratings and characteristics.

In using this part of IEC 62007, detail specification writers add but do not delete specification parameters and/or groups of specification parameters for particular applications.

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 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

3.1 Terms and definitions

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

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

[SOURCE: IEC 60050-731-06-29, modified — The note has been deleted.]

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