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Standards

Irish Standard
I.S. EN IEC 62148-21:2019

Fibre optic active components and devices
- Package and interface standards - Part
21: Design guide of electrical interface of
PIC packages using silicon fine-pitch ball
grid array (S-FBGA) and silicon fine-pitch
land grid array (S-FLGA)

I.S. EN IEC 62148-21:2019

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National Foreword

I.S. EN IEC 62148-21:2019 is the adopted Irish version of the European Document EN IEC 62148-21:2019, Fibre optic active components and devices - Package and interface standards - Part 21: Design guide of electrical interface of PIC packages using silicon fine-pitch ball grid array (S-FBGA) and silicon fine-pitch land grid array (S-FLGA)

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EUROPEAN STANDARD

EN IEC 62148-21

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2019

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English Version

Fibre optic active components and devices - Package and interface standards - Part 21: Design guide of electrical interface of PIC packages using silicon fine-pitch ball grid array (S-FBGA) and silicon fine-pitch land grid array (S-FLGA) (IEC 62148-21:2019)

Composants et dispositifs actifs fibroniques - Normes de boîtier et d'interface - Partie 21: Guide de conception de l'interface électrique des boîtiers PIC utilisant des boîtiers matriciels à billes et à pas fins en silicium (S-FBGA) et des boîtiers matriciels à zone de contact plate et à pas fins en silicium (S-FLGA)
(IEC 62148-21:2019)

Aktive Lichtwellenleiterbauelemente und Geräte - Gehäuse- und Schnittstellennormen - Teil 21: Konstruktionsleitfaden für elektrische Schnittstellen von PIC-Gehäusen mit Si-Feinraster-Ball-Grid-Array (S-FBGA) und Si-Feinraster-Land-Grid-Array (S-FLGA)
(IEC 62148-21:2019)

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Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 62148-21:2019 (E)

European foreword

The text of document 86C/1571/FDIS, future edition 1 of IEC 62148-21, 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 IEC 62148-21:2019.

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) 2020-01-15
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IEC 60191-6-22 NOTE Harmonized as EN 60191-6-22

IEC 62148-1 NOTE Harmonized as EN IEC 62148-1

IEC 62148-19¹ NOTE Harmonized as EN IEC 62148-19²

¹ Under preparation. Stage at the time of publication: IEC/TFDIS 62148-19:2018.

² Under preparation. Stage at the time of publication: FprEN IEC 62148-19:2019.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where 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 60050-731	-	International Electrotechnical Vocabulary - Chapter 731: Optical fibre communication	-	-
IEC/TR 61931	-	Fibre optic - Terminology	-	-

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IEC 62148-21

Edition 1.0 2019-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fibre optic active components and devices – Package and interface standards –
Part 21: Design guide of electrical interface of PIC packages using silicon fine-
pitch ball grid array (S-FBGA) and silicon fine-pitch land grid array (S-FLGA)**

**Composants et dispositifs actifs fibroniques – Normes de boîtier et d'interface –
Partie 21: Guide de conception de l'interface électrique des boîtiers PIC utilisant
des boîtiers matriciels à billes et à pas fins en silicium (S-FBGA) et des boîtiers
matriciels à zone de contact plate et à pas fins en silicium (S-FLGA)**





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Part 21: Design guide of electrical interface of PIC packages using silicon fine-
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matriciels à zone de contact plate et à pas fins en silicium (S-FLGA)**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES –
PACKAGE AND INTERFACE STANDARDS –**
**Part 21: Design guide of electrical interface of PIC
packages using silicon fine-pitch ball grid array (S-FBGA)
and silicon fine-pitch land grid array (S-FLGA)**

FOREWORD

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International Standard IEC 62148-21 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
86C/1571/FDIS	86C/1577/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

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

A list of all parts in the IEC 62148 series, published under the general title *Fibre optic active components and devices – Package and interface standards*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES – PACKAGE AND INTERFACE STANDARDS –

Part 21: Design guide of electrical interface of PIC packages using silicon fine-pitch ball grid array (S-FBGA) and silicon fine-pitch land grid array (S-FLGA)

1 Scope

This part of IEC 62148 covers the design guide of the electrical interface for photonic integrated circuit (PIC) packages using silicon fine-pitch ball grid array (S-FBGA) and silicon fine-pitch land grid array (S-FLGA). In this document, the electrical interface for the S-FBGA package is informative.

The purpose of this document is to specify adequately the electrical interface of PIC packages composed of optical transmitters and receivers that enable mechanical and electrical interchangeability of PIC packages.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60050-731, *International Electrotechnical Vocabulary – Chapter 731: Optical fibre communication*

IEC TR 61931, *Fibre optic – Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-731, IEC TR 61931 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
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3.1

silicon fine-pitch ball grid array S-FBGA

device composed of silicon die, dielectric layer(s) on the die, rerouting wires from the die pads to outer balls on the dielectric layer(s), and outer balls with heights more than 0,1 mm

Note 1 to entry: This note only applies to the French language.

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