ICS 33.180.20 SLOVENSKÁ TECHNICKÁ NORMA September 2021

STN	**Optovláknové aktívne súčiastky a prvky Normy na puzdro a rozhranie Časť 21: Konštrukčný návrh elektrického rozhrania PIC puzdier s S-FBGA a S-FLGA**	**STN EN IEC 62148-21** 35 9255

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

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/21

Obsahuje: EN IEC 62148-21:2021, IEC 62148-21:2021

Oznámením tejto normy sa od 27.05.2024 ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN IEC 62148-21

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

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

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
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-04-15

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

Endorsement notice

The text of the International Standard IEC 62148-21:2019 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 60191-6-22 NOTE Harmonized as EN 60191-6-22

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

IEC 62148-19[1] NOTE Harmonized as EN IEC 62148-19[2]

[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.

Publication	Year	Title	EN/HD	Year
IEC 60050-731	-	International Electrotechnical Vocabulary - Chapter 731: Optical fibre communication	-	-
IEC/TR 61931	-	Fibre optic - Terminology	-	-

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INTERNATIONAL STANDARD

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

This second edition cancels and replaces the first edition published in 2019. This edition constitutes a technical revision.

This edition includes the following significant technical change with respect to the previous edition: specification of an electric guard band area around the optical terminal area, so as to allow applications with electric signals at higher symbol rates (e.g. 50 Gbaud and 100 Gbaud).

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

CDV	Report on voting
86C/1684/CDV	86C/1710/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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 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 guidelines 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 guidelines 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* (available at www.electropedia.org)