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STN	**Optovláknové aktívne súčiastky a prvky Normy na puzdro a rozhranie Časť 15: Puzdrá diskrétnych povrchovo emitujúcich laserov s vertikálnym rezonátorom**	**STN EN IEC 62148-15** 35 9255

Fibre optic active components and devices - Package and interface standards - Part 15: Discrete vertical cavity surface emitting laser packages

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

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EUROPEAN STANDARD

NORME EUROPÉENNE

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EN IEC 62148-15

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Supersedes EN 62148-15:2014 and all of its amendments and corrigenda (if any)

English Version

Fibre optic active components and devices - Package and interface standards - Part 15: Discrete vertical cavity surface emitting laser packages (IEC 62148-15:2021)

Composants et dispositifs actifs fibroniques - Normes de boîtier et d'interface - Partie 15: Boîtiers individuels pour laser à cavité verticale émettant par la surface (IEC 62148-15:2021)

Aktive Lichtwellenleiterbauelemente und -geräte - Gehäuse- und Schnittstellennormen - Teil 15: Einzelgehäuse für oberflächenemittierende Laser mit vertikalem Resonator (IEC 62148-15:2021)

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Europäisches Komitee für Elektrotechnische Normung

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

EN IEC 62148-15:2021 (E)

European foreword

The text of document 86C/1709/FDIS, future edition 3 of IEC 62148-15, 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 62148-15:2021.

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) 2022-02-04
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-05-04

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60130 (series)	NOTE	Harmonized as EN 60130 (series)
IEC 60191 (series)	NOTE	Harmonized as EN 60191 (series)
IEC 60603 (series)	NOTE	Harmonized as EN 60603 (series)
IEC 60793-2 (series)	NOTE	Harmonized as EN 60793-2 (series)
IEC 60794 (series)	NOTE	Harmonized as EN IEC 60794 (series)
IEC 60825 (series)	NOTE	Harmonized as EN 60825 (series)
IEC 61076 (series)	NOTE	Harmonized as EN IEC 61076 (series)
IEC 61280 (series)	NOTE	Harmonized as EN IEC 61280 (series)
IEC 61281-1	NOTE	Harmonized as EN IEC 61281-1
IEC 62007-1	NOTE	Harmonized as EN 62007-1
IEC 62007-2	NOTE	Harmonized as EN 62007-2
IEC 62148-1	NOTE	Harmonized as EN IEC 62148-1
IEC 62149-2	NOTE	Harmonized as EN 62149-2
ISO 1101	NOTE	Harmonized as EN ISO 1101

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 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN IEC 60793-2-50	-
IEC 60874	series	Fibre optic interconnecting devices and passive components - Connectors for optical fibres and cables	-	-
IEC 61754	series	Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces	-	-
IEC 61754-4-100	-	Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 4-100: Type SC connector family - Simplified receptacle SC-PC connector interfaces	EN 61754-4-100	-
IEC 61754-20	-	Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 20: Type LC connector family	EN 61754-20	-
IEC 62148-1	-	Fibre optic active components and devices - Package and interface standards - Part 1: General and guidance	EN IEC 62148-1	-
ITU-T G.652	-	Characteristics of a single-mode optical fibre and cable	-	-
ASTM B-652.B	-	Standard Specification for Niobium-Hafnium Alloy Ingots	-	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Fibre optic active components and devices – Package and interface standards – Part 15: Discrete vertical cavity surface emitting laser packages

Composants et dispositifs actifs fibroniques – Normes de boîtier et d'interface – Partie 15: Boîtiers individuels pour laser à cavité verticale émettant par la surface

IEC 62148-15:2021-03(en-fr)

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CONTENTS

FOREWORD 5
INTRODUCTION 7
1 Scope 8
2 Normative references 8
3 Terms, definitions and abbreviated terms 8
3.1 Terms and definitions 9
3.2 Abbreviated terms 9
4 Classification 9
5 Specification of the optical interface 9
5.1 General 9
5.2 Optical connector interface 9
5.3 Pigtail interface 9
6 Specifications of electrical interfaces 9
6.1 General 9
6.2 Electrical interface specifications for VCSEL TO CAN packages 10
6.2.1 General 10
6.2.2 Numbering of electrical terminals 10
6.2.3 Electrical terminal assignment 10
6.3 Electrical interface specifications for VCSEL TOSA package with an LC connector 11
6.3.1 General 11
6.3.2 Numbering of electrical terminals 11
6.3.3 Electrical terminal assignment 11
6.4 Electrical interface specifications for VCSEL TOSA package with an SC connector 11
6.4.1 General 11
6.4.2 Numbering of electrical terminals 11
6.4.3 Electrical terminal assignment 12
7 Outline 12
7.1 General 12
7.2 Outline of VCSEL TO CAN packages 12
7.2.1 Drawings of case outline 12
7.2.2 Dimensions of VCSEL TO CAN packages 13
7.3 Outlines of VCSEL TOSA package with an LC connector for uses at low speed (below 8 Gbit/s) 14
7.3.1 Drawings of case outline 14
7.3.2 Dimensions of VCSEL TOSA package with an LC connector for uses at low speed (below 8 Gbit/s) 14
7.3.3 Optical receptacle LC style 15
7.4 Outlines of VCSEL TOSA package with an SC connector for uses at low speed (below 8 Gbit/s) 15
7.4.1 Drawings of case outline 15
7.4.2 Dimensions of VCSEL TOSA package with an SC connector for uses at low speed (below 8 Gbit/s) 16
7.4.3 Optical receptacle SC style 16
7.5 Outlines of VCSEL TOSA package with an LC connector for uses at high speed (≥ 8 Gbit/s) 16

7.5.1 Drawings of case outline 16
7.5.2 Dimensions of VCSEL TOSA package with an LC connector for uses at high speed (≥ 8 Gbit/s) 18
7.6 Outlines of VCSEL TOSA package with an SC connector for uses at high speed (≥ 8 Gbit/s) 18
7.6.1 Drawings of case outline 18
7.6.2 Dimensions of VCSEL TOSA package with an SC connector for uses at high speed (≥ 8 Gbit/s) 19
7.7 Electrical terminals of high-speed (≥ 8 Gbit/s) VCSEL TOSA packages for both cases with LC and SC connectors 20
7.7.1 Pin out terminals 20
7.7.2 Pad terminals 21
7.8 Outlines of VCSEL pigtail package 21
7.8.1 Drawings of case outline 21
7.8.2 Dimensions of VCSEL pigtail package 22
7.8.3 Optical connectors 22
Bibliography 23

Figure 1 – Electrical terminal numbering assignments of 3-pin and 4-pin type TO CAN packages with optional colour code C for pin configuration 10
Figure 2 – Electrical terminal numbering assignments of 3-pin and 4-pin type TOSA packages with LC connector and with optional colour code C 11
Figure 3 – Electrical terminal numbering assignments of 3-pin and 4-pin type TOSA packages with SC connector and with optional colour code C 12
Figure 4 – Schematic diagrams and pin-out of VCSEL TO CANs with flat window, with ball lens, and with tilted window with optional colour code C on the bottom 13
Figure 5 – Schematic diagram of VCSEL TOSA package with LC connector and with optional colour code C on the bottom for uses at low speed (below 8 Gbit/s) 14
Figure 6 – Schematic diagram of VCSEL TOSA package with SC connector and with optional colour code C on the bottom for uses at low speed (below 8 Gbit/s) 15
Figure 7 – Schematic diagram of VCSEL TOSA package with LC connector and with optional colour code C for pin-type notation for uses at high speed (≥ 8 Gbit/s) 17
Figure 8 – Schematic diagram of VCSEL TOSA package with SC connector and with optional colour code C for pin-type notation for uses at high speed (≥ 8 Gbit/s) 19
Figure 9 – Schematic diagram and pin-out of VCSEL pigtail package with optional colour code C 22

Table 1 – Pin-function definitions of 4-pin type VCSEL TO CAN packages 10
Table 2 – Pin-function definitions of 3-pin type VCSEL TO CAN packages 11
Table 3 – Dimension of VCSEL TO CANs with flat window, ball lens and tilted window 14
Table 4 – Dimensions of VCSEL TOSA package with LC connector for uses at low speed (below 8 Gbit/s) 15
Table 5 – Dimension of VCSEL TOSA package with SC connector for uses at low speed (below 8 Gbit/s) 16
Table 6 – Dimension of VCSEL TOSA package with LC connector for uses at high speed (≥ 8 Gbit/s) 18
Table 7 – Dimension of VCSEL TOSA package with SC connector for uses at high speed (≥ 8 Gbit/s) 20
Table 8 – Pin out terminals of VCSEL TOSA package with LC and SC connectors for uses at high speed (≥ 8 Gbit/s) 21

Table 9 – Pad terminals of VCSEL TOSA package with LC and SC connectors and with flexible printed circuit board for uses at high speed (≥ 8 Gbit/s) 21

Table 10 – Dimensions of VCSEL pigtail package 22

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

Part 15: Discrete vertical cavity surface emitting laser packages

FOREWORD

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IEC 62148-15 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 third edition cancels and replaces the second edition published in 2014. This edition constitutes a technical revision.

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

a) the classification of optical/electrical interface types is generalized and referred to IEC 62148-1;
b) a new pin mode is added to Table 1;
c) several dimensions of the VCSEL TO CAN package are changed in Table 3 to reflect the current state of technology;
d) Figure 7 is updated to show the complete details of the VCSEL TOSA package.

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

FDIS	Report on voting
86C/1709/FDIS	86C/1712/RVD

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.

A list of all parts of 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.

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.

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.

INTRODUCTION

Fibre optic laser devices are used to convert electrical signals into optical signals. This document covers the physical dimension and interface for discrete vertical cavity surface emitting laser (VCSEL) packages.

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

Part 15: Discrete vertical cavity surface emitting laser packages

1 Scope

This part of IEC 62148 covers the physical dimension and interface specifications for discrete vertical cavity surface emitting laser (VCSEL) devices in optical telecommunication and optical data transmission applications.

The intent of this document is to adequately specify the physical requirements of VCSEL devices that will enable mechanical interchangeability of laser devices or transmitters complying with this document both at the printed circuit wiring board and for any panel-mounting requirement

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 60793-2-50, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*

IEC 60874 (all parts), *Fibre optic interconnecting devices and passive components – Connectors for optical fibres and cables*

IEC 61754 (all parts), *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*

IEC 61754-4-100, *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces – Part 4-100: Type SC connector family – Simplified receptacle SC-PC connector interfaces*

IEC 61754-20, *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces – Part 20: Type LC connector family*

IEC 62148-1, *Fibre optic active components and devices – Package and interface standards – Part 1: General and guidance*

ITU-T Recommendation G.652, *Characteristics of a single-mode optical fibre and cable*

ASTM B-652.B, *Standard Specification for Niobium-Hafnium Alloy Ingots*