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Fibre optic active components and devices - Package and interface standards -- Part 11: 14-pin active device modules (IEC 62148-11:2009 (EQV))

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English version

**Fibre optic active components and devices -
Package and interface standards -
Part 11: 14-pin active device modules
(IEC 62148-11:2009)**

Composants et dispositifs actifs
en fibres optiques -
Normes de boîtier et d'interface -
Partie 11: Modules de dispositifs actifs
de 14 broches
(CEI 62148-11:2009)

Aktive Lichtwellenleiterbauelemente
und -geräte -
Gehäuse- und Schnittstellennormen -
Teil 11: Aktive Geräte mit 14 Anschlüssen
(IEC 62148-11:2009)

This European Standard was approved by CENELEC on 2009-10-01. 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.

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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

I.S. EN 62148-11:2009

EN 62148-11:2009

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Foreword

The text of document 86C/882/FDIS, future edition 2 of IEC 62148-11, 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 62148-11 on 2009-10-01.

This European Standard supersedes EN 62148-11:2003

EN 62148-11:2003 was limited to 14-pin modulator-integrated laser diode transmitters. EN 62148-11:2009 has been expanded to include 14-pin pump lasers and the title changed to reflect the new scope.

This standard is to be used in conjunction with EN 62148-1.

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) 2010-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-10-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62148-11:2009 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60793 NOTE Harmonized in EN 60793 series (not modified).

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 60793-2-50	- ¹⁾	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	2008 ²⁾
IEC 60874	Series	Connectors for optical fibres and cables	EN 60874	Series
IEC 62148-1	- ¹⁾	Fibre optic active components and devices - Package and interface standards - Part 1: General and guidance	EN 62148-1	2002 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 11: 14-pin active device modules

FOREWORD

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International Standard IEC 62148-11 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

This standard is to be read in conjunction with IEC 62148-1.

This second edition cancels and replaces the first edition, published in 2003, and constitutes a technical revision.

The first edition was limited to 14-pin modulator-integrated laser diode transmitters. The second edition has been expanded to include 14-pin pump lasers and the title changed to reflect the new scope.

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

FDIS	Report on voting
86C/882/FDIS	86C/898/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 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 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.

INTRODUCTION

Modulator integrated laser diode transmitters are used to convert electrical signals into optical signals. Pump diode lasers are used to supply optical pump power in the rare earth doped optical fibre amplifiers. This standard covers the physical interface for modulator integrated laser diode transmitters and pump diode lasers. These transmitters and lasers are designed as a pigtailed 14-pin butterfly package with thermo-electric cooler.

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

Part 11: 14-pin active device modules

1 Scope and object

This part of IEC 62148 covers physical interface specification for modulator integrated laser diode transmitters.

The object of this standard is to adequately specify the physical requirements of an optical transmitter that will enable mechanical interchangeability of transmitters complying with this standard both at the printed circuit board and for any panel mounting requirement.

2 Normative references

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

IEC 60874 (all parts), *Connectors for optical fibres and cables*

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

3 Abbreviations

For the purposes of this document, the following abbreviations apply.

PD Monitor PD

TEC Thermo-electric cooler

4 Classification

The modulator integrated laser diode transmitter described in this part of IEC 62148 is classified as Type 3 according to the definitions of IEC 62148-1.

5 Specification of fibre optic transmitter module

5.1 Pigtail interface

All optical fibres which are defined in IEC 60793-2-50 are applicable.

All optical connectors which are defined in IEC 60874 series are applicable if a pigtail is to be terminated with an optical connector.

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