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**Aktivne komponente in naprave optičnih vlaken - Standardi za ohišja in vmesnike -  
18. del: Serijske oddajniške in sprejemniške komponente 40-Gbit/s za uporabo z  
vmesnikom z LC-konektorji (IEC 62148-18:2014)**

Fiber optic active components and devices: package and interface standards - Part 18:  
40-Gbit/s serial transmitter and receiver components for use with the LC connector  
interface (IEC 62148-18:2014)

**iTeh STANDARD PREVIEW**  
(standard preview)  
Aktive Lichtwellenleiterbauelemente und -geräte - Gehäuse- und Schnittstellennormen -  
Teil 18: Serielle Sende- und Empfangsmodule für 40 Gbit/s für Schnittstellen mit LC-  
Steckverbinder (IEC 62148-18:2014)

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Partie 18 : Composants d'émetteurs et de récepteurs série à 40 Gbit/s, destinés à être  
utilisés avec les interfaces des connecteurs LC (IEC 62148-18:2014)

**Ta slovenski standard je istoveten z: EN 62148-18:2015**

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**ICS:**

33.180.20	Povezovalne naprave za optična vlakna	Fibre optic interconnecting devices
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EUROPEAN STANDARD

**EN 62148-18**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2015

ICS 33.180.20

English Version

Fibre optic active components and devices - Package and interface standards - Part 18: 40-Gbit/s serial transmitter and receiver components for use with the LC connector interface  
(IEC 62148-18:2014)

Composants et dispositifs actifs à fibres optiques - Normes de boîtier et d'interface - Partie 18 : Composants d'émetteurs et de récepteurs série à 40 Gbit/s, destinés à être utilisés avec les interfaces des connecteurs LC  
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Aktive Lichtwellenleiterbauelemente und -geräte - Gehäuse- und Schnittstellennormen - Teil 18: Serielle Sende- und Empfangsmodule für 40 Gbit/s für Schnittstellen mit LC-Steckverbinder  
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## Foreword

The text of document 86C/1227/CDV, future edition 1 of IEC 62148-18, 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 62148-18:2015.

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) 2015-09-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-12-30

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IEC 60191	NOTE	Harmonized in EN 60191 series (not modified).
IEC 61281-1	NOTE	Harmonized as EN 61281-1.
IEC 61754-20	NOTE	Harmonized as EN 61754-20.
ISO 1101	NOTE	Harmonized as EN ISO 1101.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62148-1	-	Fibre optic active components and devices - Package and interface standards - Part 1: General and guidance	EN 62148-1	-
IEC Guide 107	-	Electromagnetic compatibility - Guide to the drafting of electromagnetic compatibility publications	-	-

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IEC 62148-18

Edition 1.0 2014-11

# INTERNATIONAL STANDARD

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**Fibre optic active components and devices – Package and interface standards –  
Part 18: 40-Gbit/s serial transmitter and receiver components for use with  
the LC connector interface**

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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

PRICE CODE



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ICS 33.180.20

ISBN 978-2-8322-1923-2

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

**Part 18: 40-Gbit/s serial transmitter and receiver components  
for use with the LC connector interface**

## FOREWORD

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International Standard IEC 62148-18 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

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

CDV	Report on voting
86C/1227/CDV	86C/1273/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 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 stability 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.

A bilingual version of this publication may be issued at a later date.

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## INTRODUCTION

Compact optical sub-assembly (OSA) modules for 40 Gbit/s are used to convert electrical signals into optical signals and vice-versa. This part of IEC 62148 covers the physical interface for 40-Gbit/s compact OSA modules. These modules are designed for use with the LC fibre optic connector specified in IEC 61754-20, and are intended to be applied to 40 Gbit/s or higher bit rate transceivers.

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

### Part 18: 40-Gbit/s serial transmitter and receiver components for use with the LC connector interface

#### 1 Scope

This part of IEC 62148 covers the 40-Gbit/s serial physical interface specification of transmitter and receiver components for use with the LC connector interface.

The purpose of this standard is to adequately specify the physical requirements of optical transmitters and receivers that will enable mechanical interchangeability of transmitters and receivers complying with this standard both at the PCB level and for any panel-mounting requirement.

#### 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 62148-1, *Fibre optic active components and devices – Package and interface standards – Part 1: General and guidance*, [standards.iteh.ai/catalog/standards/sist/40bb214b-dead-41e9-bcc7-5fe45da63288/sist-en-62148-18-2015](https://standards.iteh.ai/catalog/standards/sist/40bb214b-dead-41e9-bcc7-5fe45da63288/sist-en-62148-18-2015)

IEC Guide 107, *Electromagnetic compatibility – Guide to the drafting of electromagnetic compatibility publications*

#### 3 Terms, definitions and abbreviations

For the purposes of this document, the following terms, definitions and abbreviations apply.

##### 3.1 Terms and definitions

###### 3.1.1

###### **TOSA module**

optical module that converts electrical signals into optical signals and that is connected to an optical fibre

###### 3.1.2

###### **ROSA module**

optical module that converts optical signals into electrical signals and that is connected to an optical fibre

##### 3.2 Abbreviations

DML	directly modulated laser diode
EmwL	external modulator with laser diode
FPC	flexible printed circuit
LD	laser diode
OSA	optical sub-assembly