



**NSAI**  
Standards

Irish Standard  
I.S. EN IEC 62149-11:2020

Fibre optic active components and devices  
- Performance standards - Part 11:  
Multiple channel transmitter/receiver chip  
scale package with multimode fibre  
interface

**I.S. EN IEC 62149-11:2020**

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## National Foreword

I.S. EN IEC 62149-11:2020 is the adopted Irish version of the European Document EN IEC 62149-11:2020, Fibre optic active components and devices - Performance standards - Part 11: Multiple channel transmitter/receiver chip scale package with multimode fibre interface

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EUROPEAN STANDARD

**EN IEC 62149-11**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

**Fibre optic active components and devices - Performance standards - Part 11: Multiple channel transmitter/receiver chip scale package with multimode fibre interface (IEC 62149-11:2020)**

Composants et dispositifs actifs fibroniques - Normes de performances - Partie 11: Boîtier-puce émetteur/récepteur à plusieurs canaux avec interface à fibre multimodale (IEC 62149-11:2020)

Aktive Lichtwellenleiterbauelemente und -geräte - Betriebsverhaltensnormen - Teil 11: Mehrkanal-Sender-Empfänger-Chip-Scale-Bauelemente mit Mehrmodenfaser-Schnittstelle (IEC 62149-11:2020)

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**EN IEC 62149-11:2020 (E)****European foreword**

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**IEC 62149-11**

Edition 1.0 2020-04

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

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**Fibre optic active components and devices – Performance standards –  
Part 11: Multiple channel transmitter/receiver chip scale package with multimode  
fibre interface**

**Composants et dispositifs actifs fibroniques – Normes de performances –  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES –  
PERFORMANCE STANDARDS –**
**Part 11: Multiple channel transmitter/receiver chip scale package with  
multimode fibre interface**

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International Standard IEC 62149-11 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:

CDV	Report on voting
86C/1596/CDV	86C/1615/RVC

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 62149 series, published under the general title *Fibre optic active components and devices – Performance standards*, can be found on the IEC website.

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

## INTRODUCTION

A photonic chip scale package (CSP) is used to convert electrical signals into optical signals and vice-versa. This document covers the performance standards for photonic chip scale packages for use with multimode fibre through free space optics or multiple channel optical fibre connectors.

## FIBRE OPTIC ACTIVE COMPONENTS AND DEVICES – PERFORMANCE STANDARDS –

### Part 11: Multiple channel transmitter/receiver chip scale package with multimode fibre interface

#### 1 Scope

This part of IEC 62149 specifies the performance standards for a multiple channel transmitter/receiver chip scale package (CSP) with multimode fibre interface that operates at up to 28 Gbit/s per channel. It specifies the parameters that apply, with clearly defined conditions, severities, and pass/fail criteria. The tests are intended to be run as an initial design verification to prove any product's ability to satisfy the performance standard's requirements.

A product that has been shown to meet all the requirements of a performance standard can be declared as complying with the performance standard, but is then controlled by a quality assurance/quality conformance program.

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##### 3.1 Terms and definitions

###### 3.1.1

###### photonic chip scale package

chip O/E and/or E/O convertor, where electrical I/Os and optical I/Os are also included

##### 3.2 Abbreviated terms

CDR	clock data recovery
CSP	chip scale package
DIN	inverted data input voltage
DIP	non-inverted data input voltage
E/O	electrical to optical
I/O	input/output
LD	laser diode
MOD	optical modulator
O/E	optical to electrical
OMA	optical modulation amplitude

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