

**Optical amplifiers - Part 2: Digital applications -
Performance specification template**

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English version

**Optical amplifiers -
Part 2: Digital applications -
Performance specification template
(IEC 61291-2:2012)**

Amplificateurs optiques -
Partie 2: Applications numériques -
Modèles de spécifications de
performances
(CEI 61291-2:2012)

Lichtwellenleiter-Verstärker -
Teil 2: Digitale Anwendungen -
Vorlage für
Betriebsverhaltensspezifikationen
(IEC 61291-2:2012)

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CENELEC

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

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Foreword

The text of document 86C/1018/CDV, future edition 3 of IEC 61291-2, 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 61291-2:2012.

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) 2012-11-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-02-14

This document supersedes EN 61291-2:2007.

EN 61291-2:2012 constitutes a minor update through clarification that the scope is for single channel optical amplifiers, and that pump leakage parameters do not apply to semiconductor optical amplifiers.

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

Endorsement notice

The text of the International Standard IEC 61291-2:2012 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 61280 series NOTE Harmonized in EN 61280 series.

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 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 60825-1	1993	Safety of laser products - Part 1: Equipment classification, requirements + A11 and user's guide	EN 60825-1 ¹⁾	1994 1996
IEC 61290	Series	Optical amplifiers - Test methods	EN 61290	Series
IEC 61291-1	-	Optical amplifiers - Part 1: Generic specification	EN 61291-1	-
IEC 61291-5-2	-	Optical amplifiers - Part 5-2: Qualification specifications - Reliability qualification for optical fibre amplifiers	EN 61291-5-2	-
IEC Guide 107	-	Electromagnetic compatibility - Guide to the drafting of electromagnetic compatibility publications	-	-

¹⁾ EN 60825-1 is superseded by EN 62471:2008, which is based on IEC 62471:2006.

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INTRODUCTION

This international standard is devoted to the subject of optical amplifiers. The technology of optical amplifiers is still rapidly evolving, hence amendments and new additions to this standard can be expected. Each abbreviation introduced in this international standard is generally explained in the text the first time it appears. However, for an easier understanding of the whole text, a list of all abbreviations used in this international standard is given in Clause 3.

OPTICAL AMPLIFIERS –

Part 2: Digital applications – Performance specification template

1 Scope and object

This performance specification template applies to single channel optical amplifier (OA) devices to be used in digital applications. For multichannel applications, use IEC 61291, Part 4.

The object of this performance specification template is to provide a frame for the preparation of detail specifications on the performances of single channel OA devices to be used in digital applications.

Detail specification writers may add specification parameters and/or groups of specification parameters for particular applications. However, detail specification writers may not remove specification parameters specified in this standard.

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 60825-1:1993, *Safety of laser products – Part 1: Equipment classification and requirements*

IEC 61290 (all parts), *Optical amplifiers – Test methods*

IEC 61291-1, *Optical amplifiers – Part 1: Generic specification*

IEC 61291-5-2, *Optical amplifiers – Part 5-2: Qualification specifications – Reliability qualification for optical fibre amplifiers*

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

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions of IEC 61291-1 apply.

NOTE Possible supplementary definitions specific to OAs for digital applications may be given in detail specifications.

3.2 Abbreviated terms

OA	optical amplifier
EMC	electromagnetic compatibility
ESD	electrostatic discharge