
Optični ojačevalci – Preskusne metode – 10-2. del: Parametri z več kanali - metoda s pulzom pri uporabi izključevalnega optičnega spektralnega analizatorja (IEC 61290-10-2:2003)*

Optical amplifiers - Test methods - Part 10-2: Multichannel parameters - Pulse method using a gated optical spectrum analyzer (IEC 61290-10-2:2003)

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EUROPEAN STANDARD

EN 61290-10-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2003

ICS 33.180.30

English version

**Optical amplifiers -
Test methods
Part 10-2: Multichannel parameters -
Pulse method using a gated optical spectrum analyzer
(IEC 61290-10-2:2003)**

Amplificateurs optiques -
Méthodes d'essai
Partie 10-2: Paramètres à canaux
multiples -
Méthode d'impulsion utilisant un analyseur
de spectre optique stroboscopique
(CEI 61290-10-2:2003)

Prüfverfahren für Lichtwellenleiter-
Verstärker
Teil 10-2: Mehrkanalparameter -
Pulsmethode bei Verwendung
eines ausblendbaren optischen
Spektralanalysators
(IEC 61290-10-2:2003)

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 86C/461/FDIS, future edition 1 of IEC 61290-10-2, 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 was approved by CENELEC as EN 61290-10-2 on 2003-02-01.

This standard shall be read in conjunction with EN 61291-1:1998

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) 2004-02-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-02-01

The International Electrotechnical Commission (IEC) and CENELEC draw attention to the fact that it is claimed that compliance with this International Standard/European Standard may involve the use of two patents.

One patent concerns a technique for determining the amplified spontaneous emission noise of an optical amplifier in the presence of an optical signal given in clause 3 and clause 5.

The IEC and CENELEC take no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he/she is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with the IEC. Information may be obtained from:

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Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annex ZA is normative and annexes A and B are informative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61290-10-2:2003 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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 61290-10-1 | 2003 | Optical amplifiers - Test methods Part 10-1: Multichannel parameters - Pulse method using an optical switch and optical spectrum analyzer | EN 61290-10-1 | 2003 |
| IEC 61291-1 | 1998 | Optical fibre amplifiers Part 1: Generic specification | EN 61291-1 | 1998 |

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NORME
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CEI
IEC

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Première édition
First edition
2003-01

**Amplificateurs optiques –
Méthodes d'essai –**

**Partie 10-2:
Paramètres à canaux multiples –
Méthode d'impulsion utilisant un analyseur
de spectre optique stroboscopique**

**Optical amplifiers –
Test methods –**

**Part 10-2:
Multichannel parameters –
Pulse method using a gated optical
spectrum analyzer**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**OPTICAL AMPLIFIERS –
TEST METHODS –****Part 10-2: Multichannel parameters –
Pulse method using a gated optical spectrum analyzer**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
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The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of two patents.

One patent concerns a technique for determining the amplified spontaneous emission noise of an optical amplifier in the presence of an optical signal given in clause 3 and clause 5.

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International Standard IEC 61290-10-2 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

This standard shall be read in conjunction with IEC 61291-1.

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

| | |
|--------------|------------------|
| FDIS | Report on voting |
| 86C/461/FDIS | 86C/484/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.

Annexes A and B are for information only.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

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

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INTRODUCTION

As far as can be determined, this part of IEC 61290 is the first international standard on this subject. The technology of optical fibre amplifiers is still evolving, hence amendments and new editions to this document should be expected.

Each abbreviation introduced in this standard is explained in the text at least the first time it appears. However, for an easier understanding of the whole text, a list of all abbreviations used is given in annex A.

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