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Standards

Irish Standard  
I.S. EN 60793-1-52:2014

# Optical fibres - Part 1-52: Measurement methods and test procedures - Change of temperature tests

**I.S. EN 60793-1-52:2014**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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EUROPEAN STANDARD

**EN 60793-1-52**

NORME EUROPÉENNE

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May 2014

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Supersedes EN 60793-1-52:2002

English Version

**Optical fibres - Part 1-52: Measurement methods and test  
procedures - Change of temperature tests  
(IEC 60793-1-52:2014)**

Fibres optiques - Partie 1-52: Méthodes de mesure et  
procédures d'essai - Essais de variations de température  
(CEI 60793-1-52:2014)

Lichtwellenleiter - Teil 1-52: Messmethoden und  
Prüfverfahren - Temperaturwechsel  
(IEC 60793-1-52:2014)

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## **Foreword**

The text of document 86A/1528/CDV, future edition 2 of IEC 60793-1-52, prepared by SC 86A "Fibres and cables" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60793-1-52:2014.

The following dates are fixed:

- latest date by which the document has to be (dop) 2014-12-12  
implemented at national level by  
publication of an identical national  
standard or by endorsement
- latest date by which the national (dow) 2017-03-12  
standards conflicting with the  
document have to be withdrawn

This document supersedes EN 60793-1-52:2002.

EN 60793-1-52 includes the following significant technical changes with respect to EN 60793-1-52:2002:

- a) Harmonizing the content with sectional specifications of relevant fibre types;
- b) Extending the applicability of the document to class C single-mode fibres.

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.

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## 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 60068-2-14	-	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	-
IEC 60793-1-40 (mod)	2001	Optical fibres - Part 1-40: Measurement methods and test procedures - Attenuation	EN 60793-1-40	2003
IEC 60793-2-10	-	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN 60793-2-10	-
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	-
IEC 60793-2-60	-	Optical fibres - Part 2-60: Product specifications - Sectional specification for category C single-mode intraconnection fibres	EN 60793-2-60	-

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**IEC 60793-1-52**

Edition 2.0 2014-02

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



**Optical fibres –**

**Part 1-52: Measurement methods and test procedures – Change of temperature tests**

**Fibres optiques –**

**Partie 1-52: Méthodes de mesure et procédures d'essai – Essais de variations de température**



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**IEC 60793-1-52**

Edition 2.0 2014-02

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Optical fibres –**

**Part 1-52: Measurement methods and test procedures – Change of temperature tests**

**Fibres optiques –**

**Partie 1-52: Méthodes de mesure et procédures d'essai – Essais de variations de température**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### OPTICAL FIBRES –

#### **Part 1-52: Measurement methods and test procedures – Change of temperature tests**

### FOREWORD

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International Standard IEC 60793-1-52 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition, published in 2001, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- harmonizing the content with sectional specifications of relevant fibre types;
- extending the applicability of the document to class C single-mode fibres.

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

CDV	Report on voting
86A/1528/CDV	86A/1574/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 60793 series, published under the general title *Optical fibres*, 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

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## OPTICAL FIBRES –

### Part 1-52: Measurement methods and test procedures – Change of temperature tests

#### 1 Scope

This part of IEC 60793 provides a practical method for evaluating fibre performance in a defined environment.

The purpose of this standard is to define a test that determines the suitability of sub-category A1a to A1d multimode fibres and class B and C single-mode fibres to withstand the environmental condition of change in temperature which may occur in actual use, storage and/or transport. The test is primarily intended to permit the observation of effects of change of temperature over a given period. This procedure is conducted in accordance with IEC 60068-2-14, Test Nb.

NOTE The applicability of this test to other fibre categories is under study.

#### 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 60068-2-14, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60793-1-40:2001, *Optical fibres – Part 1-40: Attenuation measurement methods*

IEC 60793-2-10, *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres*

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

IEC 60793-2-60, *Optical fibres – Part 2-60: Product specifications – Sectional specification for class C single-mode intraconnection fibres*

#### 3 Apparatus

##### 3.1 Chamber

The apparatus consists of an environmental chamber in accordance with IEC 60068-2-14, Test Nb. The chamber shall be capable of housing the specimen and of allowing measurement during conditioning. It shall also be capable of maintaining the specified temperatures within the specified tolerances. Forced air circulation may be used to maintain homogeneous conditions. The chamber and accessories shall be constructed and arranged in such a manner as to avoid condensation dripping on the specimen.

##### 3.2 Other apparatus

Additional apparatus may be necessary to perform the examinations and measurements (or as specified in the detail specification).

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