



NSAI
Standards

Irish Standard
I.S. EN 60793-1-51:2014

Optical fibres - Part 1-51: Measurement methods and test procedures - Dry heat (steady state) tests

I.S. EN 60793-1-51:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

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EUROPEAN STANDARD

EN 60793-1-51

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2014

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Supersedes EN 60793-1-51:2002

English Version

**Optical fibres - Part 1-51: Measurement methods and test
procedures - Dry heat (steady state) tests
(IEC 60793-1-51:2014)**

Fibres optiques - Partie 1-51: Méthodes de mesure et
procédures d'essai - Essais de chaleur sèche (état continu)
(CEI 60793-1-51:2014)

Lichtwellenleiter - Teil 1-51: Messmethoden und
Prüfverfahren - Trockene Wärme (konstant)
(IEC 60793-1-51:2014)

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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/1527/CDV, future edition 2 of IEC 60793-1-51, 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 60793-1-51:2014.

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) 2014-12-12
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-03-12

This document supersedes EN 60793-1-51:2002.

EN 60793-1-51 includes the following significant technical changes with respect to EN 60793-1-51:2002:

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

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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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	-
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 60793-1-51

Edition 2.0 2014-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Optical fibres –
Part 1-51: Measurement methods and test procedures – Dry heat (steady state)
tests**

**Fibres optiques –
Partie 1-51: Méthodes de mesure et procédures d'essai – Essais de chaleur
sèche (état continu)**





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IEC 60793-1-51

Edition 2.0 2014-02

INTERNATIONAL STANDARD

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRES –

Part 1-51: Measurement methods and test procedures– Dry heat (steady state) tests

FOREWORD

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International Standard IEC 60793-1-51 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/1527/CDV	86A/1573/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

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

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OPTICAL FIBRES –

Part 1-51: Measurement methods and test procedures – Dry heat (steady state) 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 determine the suitability of optical fibre sub-category A1a to A1d multimode fibres and class B and C single-mode fibres to withstand the environmental condition of high temperature (dry heat) which may occur in actual use, storage and/or transport. The test is primarily intended to permit the observation of effects of high temperature over a given period. This procedure is conducted in accordance with IEC 60068-2-2, Test Bd.

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 60068-2-2, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

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

IEC 60793-2-10, *Optical fibres – Part 2-50: 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 60068-2-2, Test Bd. The chamber shall be capable of housing the specimen, without subjecting it to direct radiant heat, and of allowing access for measurement during conditioning. It shall also be capable of maintaining the specified temperature within the specified tolerances. Forced air circulation may be used to maintain homogeneous conditions.

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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