ICS 31.180 SLOVENSKÁ TECHNICKÁ NORMA Február 2024

STN	**Skúšobná metóda pre mechanické vlastnosti flexibilných dosiek s optoelektrickými obvodmi pri tepelnom namáhaní**	**STN EN IEC 63251** 34 6513

Test method for mechanical properties of flexible opto-electric circuit boards under thermal stress

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/24

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 63251

December 2023

ICS 31.180

English Version

Test method for mechanical properties of flexible opto-electric circuit boards under thermal stress (IEC 63251:2023)

Méthode d'essai des propriétés mécaniques des circuits optoélectriques souples sous contrainte thermique (IEC 63251:2023)

Prüfverfahren für mechanische Eigenschaften von elektrisch-optischen Leiterplatten unter Wärmebeanspruchung (IEC 63251:2023)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 63251:2023 E

European foreword

The text of document 91/1898/FDIS, future edition 1 of IEC 63251, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63251:2023.

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)	2024-09-06
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2026-12-06

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Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 63251:2023 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60793-2 (series) NOTE Approved as EN 60793-2 (series)

IEC 62496-3-1 NOTE Approved as EN 62496-3-1

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where 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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests Test B: Dry heat	-EN 60068-2-2	-
IEC 60068-2-14	-	Environmental testing - Part 2-14: Tests Test N: Change of temperature	-EN IEC 60068-2-14	-
IEC 60068-2-78	-	Environmental testing - Part 2-78: Tests Test Cab: Damp heat, steady state	-EN 60068-2-78	-

IEC 63251

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

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Méthode d'essai des propriétés mécaniques des circuits optoélectriques souples sous contrainte thermique

IEC 63251:2023-11(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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TEST METHOD FOR MECHANICAL PROPERTIES OF FLEXIBLE OPTO-ELECTRIC CIRCUIT BOARDS UNDER THERMAL STRESS

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 63251 has been prepared by IEC technical committee 91: Electronics assembly technology. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
91/1898/FDIS	91/1914/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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TEST METHOD FOR MECHANICAL PROPERTIES OF FLEXIBLE OPTO-ELECTRIC CIRCUIT BOARDS UNDER THERMAL STRESS

1 Scope

This International Standard defines the thermal endurance test methods for reliability assessment of flexible opto-electric circuit boards. The purpose of this document is to accommodate the uniform thermal characteristics required by the flexible opto-electric circuit in high temperature environments such as automobiles. In particular, this document specifies a test method to inspect the occurrence of colour exchange, deformation and delamination of flexible opto-electric circuit boards under thermal stress.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60068-2-14, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-78, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*