IEC 63251

Edition 1.0 2023-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

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

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 31.180

ISBN 978-2-8322-7750-8

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

FOREWORD

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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.

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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*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
optic circuit
circuit that is composed of optical waveguides and can transmit optical signals

3.2
glass optic fibre
GOF
optic fibre made of glass material

3.3
polymer optic fibre
POF
optic fibre made of polymer material

3.4
opto-electric circuit
O-E circuit
circuit that contains both optic circuit and electric circuit