

INTERNATIONAL STANDARD

Flexible display devices – **STANDARD PREVIEW**
Part 6-2: Environmental testing methods
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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FLEXIBLE DISPLAY DEVICES –

Part 6-2: Environmental testing methods

FOREWORD

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International Standard IEC 62715-6-2 has been prepared by IEC technical committee 110: Electronic display devices.

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

FDIS	Report on voting
110/860/FDIS	110/871/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62715 series, published under the general title *Flexible display devices*, can be found on the IEC website.

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

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- withdrawn,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

A bilingual version of this publication may be issued at a later date.

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FLEXIBLE DISPLAY DEVICES –

Part 6-2: Environmental testing methods

1 Scope

This part of IEC 62715 specifies testing methods for evaluating the environmental endurance of flexible display panels and modules for use, storage and transport under assumed usage environment. This part of IEC 62715 is applicable to flexible display panels and modules such as liquid crystal display devices (LCDs), electric paper display devices (EPDs), and organic light emitting diode display devices (OLEDs). This part of IEC 62715 will also be suitable for flexible panel or module with mechanical operation.

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 60068-1:2013, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-1, *Environmental testing – Part 2-1: Tests – Test A: Cold*

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 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

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

IEC 62341-6-2, *Organic light emitting diode (OLED) displays – Part 6-2: Measuring methods of visual quality and ambient performance*

IEC 62341-6-3, *Organic light emitting diode (OLED) displays – Part 6-3: Measuring methods of image quality*

IEC 62715-1-1, *Flexible display devices – Part 1-1: Terminology and letter symbols*

IEC 62715-5-1¹, *Flexible display devices – Part 5-1: Measuring methods of optical performance*

IEC 62715-5-3², *Flexible display devices – Part 5-3: Visual assessment*

¹ Under preparation. Stage at the time of publication: IEC/FDIS IEC 62715-5-1:2017.

² Under preparation. Stage at the time of publication: IEC/FDIS IEC 62715-5-3:2017.

IEC 62715-6-1, *Flexible display devices – Part 6-1: Mechanical stress test methods*

IEC 62679-3-2, *Electronic paper display – Part 3-2: Measuring method – Electro-optical*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62715-1-1 and IEC 60068-1 apply.

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

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

4 Structure of measuring equipment

The system diagrams and/or operating conditions of the measuring equipment shall comply with the structure specified in each item.

5 Standard conditions

5.1 Standard reference atmosphere

The following conditions are applied:

- temperature: 25 °C [IEC 62715-6-2:2017](https://standards.iteh.ai/catalog/standards/sist/97a22ad8-e91e-4b40-8cc4-c8f7d574663b/iec-62715-6-2-2017)
- air pressure: 101,3 kPa <https://standards.iteh.ai/catalog/standards/sist/97a22ad8-e91e-4b40-8cc4-c8f7d574663b/iec-62715-6-2-2017>

NOTE No requirement for relative humidity is given because correction by calculation is generally not possible.

If the parameters to be measured depend on temperature and/or pressure, and their dependence on temperature and pressure is known, the parameter values can be measured under the conditions specified in 5.3 and corrected by calculation to the standard reference atmosphere above.

5.2 Standard atmospheric conditions for referee measurements and tests

If the parameters to be measured depend on temperature, pressure and humidity and their dependence on temperature, pressure and humidity is unknown, the atmospheres to be specified shall be selected from the following values, as shown in Table 1. The selected values shall be noted in the relevant specifications.

Table 1 – Standard conditions for referee measurements and tests

Temperature ^a °C	Relative humidity ^b % RH	Air pressure ^b kPa
20 ±2 / ±1 25 ±2 / ±1 30 ±2 / ±1 35 ±2 / ±1	45 to 75	86 to 106
^a The close tolerances may be used for the referee measurements. The wider tolerances may be used only when allowed by the relevant specification. ^b Inclusive values.		