

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2

AMENDEMENT 2

Self-ballasted LED lamps for general lighting services with supply voltages > 50 V – Performance requirements
(standards.iteh.ai)

Lampes à LED autoballastées pour l'éclairage général avec des tensions d'alimentation > 50 V – Exigences de performances

IEC 62612:2013/AMD2:2018
<https://standards.iteh.ai/catalog/standards/sist/57583ff-161e-4bf0-9b7f-27415e8ff3a9/iec-62612-2013-amd2-2018>





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FOREWORD

This amendment has been prepared by subcommittee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

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

FDIS	Report on voting
34A/2086/FDIS	34A/2097/RVD

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

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

- reconfirmed,
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INTRODUCTION to Amendment 2

This amendment includes:

- Adjustment of Table 1 markings;
- Bypassing thermal device during test (11.3.4);
- Inclusion of LM-80 data;
- Maintained CRI.

2 Normative references

Add the following new references:

IEC 62717, *LED modules for general lighting – Performance requirements*

ANSI/IES LM-80-15, *IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules*

5.2 Places of marking

Table 1

In the first column, replace item a) with the following new item a):

- a) Rated luminous flux (lm), rated colour (see Table 3) and, for directional lamps only, beam angle

In the first column, replace item b) with the following new item b):

- b) Lamp photometric code (see Annex B) including initial and maintained colour variation category (see Table 4)

Delete the entire row e)

In the first column, replace item f) with the following new item f):

- f) For directional lamps only, peak intensity (cd)

Delete NOTE 1 and renumber the NOTES that follow as NOTE 1 and NOTE 2.

7.1 General test conditions

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For LED lamps using LED modules where compliance with IEC 62717 has been demonstrated, the test duration of 25 % of rated life time up to a maximum of 6 000 h may be avoided, provided that the LED module operates in its temperature and current limits as tested according to IEC 62717. The data for chromaticity and the lumen maintenance at 25 % of rated life, maximum 6 000 h from the IEC 62717 test report, shall be taken and used to fulfil the maintained value requirements of 10.1 and 11.2, respectively.

Alternatively, test data from ANSI/IES LM-80-15 shall be used for the derivation of maintained values at 25 % of rated life, maximum 6 000 h, together with related compliance criteria, as specified in Annex G.

10.2 Colour rendering index (CRI)

Delete the second sentence of the first paragraph.

Replace the second and third paragraphs including the list items, with the following new text:

See A.3.7 for more details.

Compliance:

For all tested units in a sample the measured CRI values shall not be lower than 3 points from the rated CRI (see Table 1).

11.3.4 Accelerated operational life test

Replace the title of 11.3.4 with the following new title:

Operational high temperature stress test

Replace the last sentence of the first paragraph with the following new text:

Any thermal protecting devices, solely applied for their function of switching at a certain temperature, that would switch off the LED lamp or reduce the light output shall be bypassed.

Replace, in the compliance statement, the sentence starting with "At the end of this test" with the following new text:

At the end of this test, and after cooling down to room temperature and being stabilised, all the lamps shall have at least a luminous flux of 70 % compared to the initial value for at least 15 min.

Add, after Annex F, the following new Annex G:

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Annex G (normative)

Use of ANSI/IES LM-80-15 for lumen maintenance and maintained chromaticity coordinates data

G.1 General

According to 10.1 (colour variation categories) and 11.2 (lumen maintenance), both initial and maintained values for the LED lamp are measured. In order to reduce the test time for obtaining maintained values (at 25 % of rated life, maximum 6 000 h), data from ANSI/IES LM-80-15 shall be used given that the conditions in Clause G.2 and the compliance criteria in Clause G.3 are met.

G.2 Criteria for the use of ANSI/IES LM-80-15

G.2.1 LED package data used for LED lamps

If data from an ANSI/IES LM-80-15 test report applied to an LED package is available, the test conditions in 7.1 are applicable for LED lamps with a test duration of 1 000 h.

For compliance criteria after 1 000 h testing, see Clause G.3.

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G.2.2 Boundary conditions (standards.iteh.ai)

G.2.2.1 General

[IEC 62612:2013/AMD2:2018](#)

The combination of the selected maximum r.m.s. input current and maximum case temperature from the ANSI/IES LM-80-15 report shall equal or exceed the LED package current and temperature under worst case conditions of the LED lamp.

G.2.2.2 Temperature

With the LED lamp operating according to the conditions in Annex A, the LED package case temperature, T_s , as defined by ANSI/IES LM-80-15, shall be measured. The highest measured value of T_s , inside the LED lamp, shall not exceed the limit temperature T_s taken from the ANSI/IES LM-80-15 report.

In the case of an LED lamp family according to Table 2, the T_s temperature measurement shall be performed with the LED lamp configuration that results in the highest T_s temperature.

G.2.2.3 LED package input current

The maximum r.m.s. input current of the LED package in the LED lamp shall not exceed the r.m.s. input current that was tested as part of ANSI/IES LM-80-15.

Where ANSI/IES LM-80-15 is used for achieving lumen maintenance and maintained chromaticity coordinates data, any controlgear control circuits for automated compensation of the light output degradation over time shall be disabled.

G.3 Compliance criteria

G.3.1 Chromaticity coordinates

LED lamps evaluated according to 10.1 with a test duration as specified in G.2.1 shall meet the initial colour variation category as declared by the manufacturer or responsible vendor according to Table 4.

G.3.2 Luminous flux maintenance

LED lamps evaluated according to 11.2 with a test duration as specified in G.2.1 shall meet the lumen maintenance code as declared by the manufacturer or responsible vendor according to Table 5.

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