Singapore Standards Council

SS IEC 60969 : 2018
IEC 60969:2016, IDT
(ICS 29.140.30)

SINGAPORE STANDARD

Self-ballasted compact fluorescent lamps for general lighting services – Performance requirements

Published by

Enterprise Singapore

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Self-ballasted compact fluorescent lamps for general lighting services – Performance requirements

ISBN 978-981-48-3520-6

This Singapore Standard was approved on 4 October 2018 by the Electrical and Electronic Standards Committee under the purview of the Standards Council of Singapore.

First published, 2019

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The Working Group on Lamps and Related Equipment, appointed by the Technical Committee to assist in the preparation of this standard, comprises the following experts who contribute in their *individual capacity*:

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The organisations in which the experts of the Working Group are involved are:

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Citrine Wireless Pte Ltd
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Gritti Consulting Pte Ltd
Housing & Development Board
Land Transport Authority
M & P Consulting Engineers
Maxspid Enterprise Pte Ltd
Nanyang Technological University
Singapore Civil Defence Force
TLS Design Pte Ltd

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National Foreword

This Singapore Standard was prepared by the Working Group on Lamps and Related Equipment appointed by the Technical Committee on Building Facilities and Services under the direction of the Electrical and Electronic Standards Committee. This standard is identical with IEC 60969:2016, "Self-ballasted compact fluorescent lamps for general lighting services – Performance requirements", published by the International Electrotechnical Commission (IEC).

The comma has been used throughout as a decimal marker whereas in Singapore Standards it is a practice to use a full point on the baseline as the decimal marker.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SELF-BALLASTED COMPACT FLUORESCENT LAMPS FOR GENERAL LIGHTING SERVICES – PERFORMANCE REQUIREMENTS

FOREWORD

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International Standard IEC 60969 has been prepared by subcommittee 34A: Lamps, of IEC technical committee 34: Lamp and related equipment.

This second edition cancels and replaces the first edition published in 1988, Amendment 1:1991 and Amendment 2:2000. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) title change;
b) scope is now limited to compact fluorescent lamps, but expanded to cover all lamps of voltages greater than 50 V and all power ratings;
c) introduction of requirements for lamp equivalency claims, switching withstand, starting time, low temperature, run up time, treatment of claims for different operating conditions;

d) enhanced assessment and compliance criteria especially for lifetime;

e) introduction in-rush test conditions and displacement factor.

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

FDIS	Report on voting
34A/1923/FDIS	34A/1945/RVD

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.

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.

The contents of the corrigendum of January 2017 have been included in this copy.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

SELF-BALLASTED COMPACT FLUORESCENT LAMPS FOR GENERAL LIGHTING SERVICES – PERFORMANCE REQUIREMENTS

1 Scope

This document specifies performance requirements together with test methods and conditions required to show compliance of self-ballasted compact fluorescent lamps intended for general lighting services.

This document applies to self-ballasted compact fluorescent lamps of voltages > 50 V and all power ratings with lamp caps complying with IEC 60061-1.

NOTE Some features of this document could be applicable to self-ballasted compact fluorescent lamps of voltages ≤ 50 V and to other types of self-ballasted gas discharge lamps.

The requirements of this document relate only to type testing.

The performance requirements specified in this document are additional to the safety requirements specified in IEC 60968.

It can be expected that self-ballasted compact fluorescent lamps, which comply with this document, will start and operate satisfactorily at normal conditions (voltages between 92 % and 106 % of rated supply voltage, ambient air temperature of between -10 °C and 40 °C and in a luminaire complying with IEC 60598-1).

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 60630, *Maximum lamp outlines for incandescent lamps*

IEC 60968, *Self-ballasted fluorescent lamps for general lighting services – Safety requirements*

IEC 61000-3-2:2014, *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase)*

IEC 61000-4-7, *Electromagnetic compatibility (EMC) – Part 4-7: Testing and measurement techniques – General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto*

IEC TR 61341, *Method of measurement of centre beam intensity and beam angle(s) of reflector lamps*

CIE 015-2004, *Colorimetry*

CIE 13.3, *Method of Measuring and Specifying Colour Rendering Properties of Light Source*