



# IECQ OPERATIONAL DOCUMENT

**IEC Quality Assessment System for Electronic Components (IECQ System)**

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**Procedures for the development, publication and maintenance of  
IECQ Component/Product Specifications used within the IECQ Scheme for  
LED Component Products**

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**IECQ Operational Document 3803 –**

**Procedures for the development, publication and maintenance of  
IECQ Component/Product Specifications used within the IECQ Scheme for  
LED Component Products**

FOREWORD

This publication has been prepared by the Management Committee of the IECQ to provide guidance on the development of specifications (including minimum specifications) for use in the IECQ System for LED Component Products.

This first edition of the publication takes effect immediately for IECQ Scheme for LED Component Products certification applications received on or after its publication date. Applications or certifications including any respective IECQ specifications that have been received or issued prior to the publication date of this publication will have transitional period 3 years.

**Document History**

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## INTRODUCTION

In any quality assessment system a certain number of documents are necessary so that products may be approved. The nature of the documents is prescribed by the rules governing the specific system. For the IEC Quality Assessment System for Electronic Components (IECQ), the required documents are specified in IECQ 01, *Basic Rules* and IECQ 03, *Rules of Procedure*, and in the specifications against which the components or process are certified as part of an overall structure.

While in many cases International Standards and Specifications like IEC, ISO, JEDEC, etc., cover minimum specifications for component products, there exists a need to address the many number of situations for which published Standards and Specifications do not exist, hence the need for a systematic process for the creation and use of specifications developed by agreement between industry and the IECQ MC or the IECQ Certification Body and the organization/company seeking IECQ Certification.

This Operational Document (OD) provides procedures for the creation of IECQ Specifications use in the IECQ System for LED Component Products, which cover minimum requirements and content for LED component products that may be considered as either:

- a) a specification that may be used throughout industry and regarded as a “publicly accessible” specification, or
- b) a specification used solely by an organization and containing proprietary detail and hence regarded as a “proprietary” specification and not publicly available.

While this first edition of the publication does not address minimum requirements for lumen maintenance within LED packages and modules (includes COBs, arrays) – Annex A, a specification may be developed and issued containing such requirements. World wide members and experts of IECQ Working Group 09 and industry are still in consideration of appropriate minimum requirements for lumen maintenance/reliability within category LED packages and modules (includes COBs, arrays) – Annex A and as such may adjust the minimum requirements as required through the publication of a revised edition.

## **Procedures for the development, publication and maintenance of IECQ Component/Product Specifications used within the IECQ Scheme for LED Component Products**

### **1 Scope**

This OD outlines the principles for the creation, maintenance and availability of specifications for use within the IECQ Scheme for LED Component Products to address minimum set of requirements as specified in the annexes of this document for Component Product Specification (CS) and those associated with assessment to the specification Assessment Specification (AS), in order to provide for:

- greater flexibility with the possibility of application specific approaches;
- consistency in the specifications issued and used within the IECQ System;
- coverage of components and processes for which International Standards do not yet exist;
- the demonstration of compliance with customer and regulatory requirements.

### **2 Normative references**

The following publications contain provisions, which, through reference in this text, constitute provisions of this document. At the time of publication, the editions indicated were valid. The IECQ Management Committee shall decide the timetable for the introduction of revised editions of the publications.

IECQ 01, *IEC Quality Assessment System for Electronic Components (IECQ System) – Basic Rules*

IECQ 03-8, *IEC Quality Assessment System for Electronic Components (IECQ System) – Rules of Procedure - Part 3-8: IECQ Scheme for LED Lighting*

ISO/IEC 17000, *Conformity assessment – Vocabulary and general principles*

IEC 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

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 60068-2-38, *Environmental testing – Part 2-38: Tests – Test Z/AD: Composite temperature/humidity cyclic test*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60598-1, *Luminaires – Part 1: General requirements and tests*

IEC 60630, *Maximum lamp outlines for incandescent lamps*

IEC 60810, *Lamps for road vehicles – Performance requirements*

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

IEC 62384, *DC or AC supplied electronic control gear for LED modules – Performance requirements*

IEC 62471, *Photobiological safety of lamps and lamp systems*

IEC 62506, *Methods for product accelerated testing*

IEC 62612, *Self-ballasted LED lamps for general lighting services with supply voltages >50 V – Performance requirements*

IEC 62722-1, *Luminaire performance – Part 1: General requirements*

IEC TR 62778, *Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires*

ISO 2859-1, *Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

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

ANSI/IES LM-82-12, *IES Approved Method: Characterizations of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature*

ANSI/IES LM-84-14, *IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires*

ANSI/IES TM-21-11, *IES Projecting Long Term Lumen Maintenance of LED Light Sources*

CIE 127 Technical Report, *Measurement of LEDs*

CIE 1976, *1976 CIE (u',v') color diagram*

ISO/CIE 11664-5, *Colorimetry — Part 5: CIE 1976 L\*u\*v\* colour space and u', v' uniform chromaticity scale diagram*

In the event of conflict between the provisions of this document and any other directly or indirectly referenced provisions, the provisions of this document shall take precedence.