American National Standard for Electric Lamps—LED (Light Emitting Diode) Lamps—Method of Designation

ANSI C78.51-2025

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Foreword

(This foreword is not part of ANSI C78.51-2025.)

This is not a new standard and is a revision of ANSI C78.51-2016 (R2022).

Suggestions for improvement of this standard are welcome. They should be sent to:

C78 Consensus Body Secretary
NEMA, 1300 North 17th Street, Suite 900
Rosslyn, Virginia 22209

This standard was developed and approved for submittal to ANSI by the C78 Consensus Body. Approval of this standard is not meant to imply that all members voted to approve it.

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Table of Contents

FOREWORD **4**

1 SCOPE **6**

2 PURPOSE **6**

3 REFERENCES **6**

3.1 Normative references 6
Informative References 7

4 DEFINITIONS **7**

5 DESCRIPTION OF A DESIGNATION **8**

5.1 General 8
5.2 Lamp Type Classification Letters 8
Figure 1—Lamp marking code layout 9
5.3 Characteristic number 9
5.3.1 Electrical characteristics 9
5.3.2 Physical Characteristics 9
5.4 Special Characteristic Letters 10
5.5 Illustration of Typical Designations 10

6 CRITERIA FOR ASSIGNMENT OF DESIGNATIONS **10**

6.1 Classification Letters 10
Classification letters as defined in 5.2 shall be assigned directly in relation to the lamp described on an LCD Request Form. 10
6.2 Electrical Characteristic Numbers 10
6.3 Special Characteristic Letters 11
6.4 Criterion for Change 11

7 ADMINISTRATION OF THE LCD PROCEDURE **11**

7.1 Administrator 11
7.2 Participants in Solid-State Lighting (SSL) Lamp Code Designation (LCD) Program 11
7.3 Advisory Group 11
7.4 Procedure for Assigning and Recording Lamp Designations 11
7.5 Procedure for a Change in the Characteristics of an Existing Lamp Designation 12
7.6 Resolution Procedure 12
7.7 LED Lamp Designation Request Form 12

8 THE PRACTICE OF LAMP CODE DESIGNATIONS BECOMING AMERICAN NATIONAL STANDARD **12**

ANNEX A **14**

ANNEX B **15**

ANNEX C **16**

ANNEX D **17**

Figures

Figure 1—Lamp marking code layout 9
Figure D.1—Process Map 19

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1 Scope

This standard describes a system for the designation of integrally ballasted Solid-State Lighting (SSL) lamps that have standardized characteristics. Lamps with clear, frosted, opaque, or prescription lenses, and with various reflector and/or emitting coatings are covered. Lamps covered in this standard contain LED-based light sources. The lamps may be connected to the branch circuit or to another voltage suitable for lighting applications, such as 12 V AC or DC.

This document is intended to allocate lamp codes for new lamps that are not direct replacements for lamps with existing ANSI Lamp Codes or Lamp Designations. OLED lamps are not included currently.

2 Purpose

The purpose of the designation system covered by this standard is to provide an identification code for use in ANSI standards. Some lamp marking requirements are also identified. Guidance is given as to which characteristics are essential to assure interchangeability for safe operation and which affect performance.

The lamp characteristic data given by a manufacturer on an LED Lamp Code Designation (LCD) Request Form becomes the basis for the assignment of a designation. The lamp code designations have not been approved by the American National Standards Institute, Inc. (ANSI) and do not constitute an American National Standard. Similarly, any consolidated listing of assigned designations with associated characteristics does not constitute an American National Standard.

3 References

The following standards contain provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

3.1 Normative references

ANSI C78.30	*Procedure for Use in Preparation of Lamp Space Drawings*
ANSI C78.79	*American National Standard for Electric Lamps—Nomenclature for Envelope Shapes Intended for Use with Electric Lamps*
ANSI C78.377	*American National Standard for Electric Lamps—Specifications for the Chromaticity of Solid-State Lighting (SSL) Products*
ANSI C78.389	*American National Standard for Electric Lamps—High Intensity Discharge—Method of Measuring Characteristics*
ANSI C81.61	*American National Standard for Electrical Lamp Bases—Specifications for Bases (Caps) for Electric Lamps*
ANSI C81.62	*American National Standard for Electric Lampholders*
ANSI C81.63	*American National Standard for Gauges for Electric Lamp Bases and Lampholders*
ANSI/IES LS-1	*Lighting Science: Nomenclature and Definitions for Illuminating Engineering*
UL1993	*Self-Ballasted Lamps and Lamp Adapters*

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