



ANSI C78.55-2020

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American National  
Standard for Electric  
Lamps — LED Lamp  
Specification Sheets  
for HID Replacement  
and Retrofit  
Applications



**National Electrical Manufacturers Association**  
**1300 North 17th Street, Suite 900 • Rosslyn, VA 22209**  
**[www.NEMA.org](http://www.NEMA.org)**





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*American National Standard for Electric Lamps—  
LED Lamp Specification Sheets for  
HID Replacement and Retrofit Applications*

Secretariat:

**National Electrical Manufacturers Association**

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**American National Standards Institute, Inc.**

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**Foreword** (This foreword is not a part of ANSI C78.55-2020)

This is a new Standard and not a revision of a previous Standard.

Suggestions for improvement of this Standard are welcomed. They should be sent to:

Secretary, ASC C78  
National Electrical Manufacturers Association  
1300 North 17<sup>th</sup> Street, Suite 900  
Rosslyn, VA 22209

This Standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Electric Lamps, C78. Approval of the Standard is not meant to imply that all Committee Members voted to approve it.

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## **Introduction**

With the rapidly changing light-emitting diode (LED) light sources for general illumination, there is a need for standardized LED lamp specification sheets for HID replacement and retrofit applications in a format that allows for the direct comparison of common characteristics across manufacturers.

Currently, many specification sheets contain different sets of data and information that can cause confusion when users compare products. Therefore, it is necessary for the American National Standards Institute (ANSI) to provide guidelines for manufacturers when creating specification sheets.

The purpose of this standardized specification sheet format is to communicate the features and performance of LED lamps for HID replacement and retrofit applications to users in a consistent manner throughout the industry.

In the context of this Standard, LED replacement lamps are intended to replace HID lamps or to be used in the retrofit of an existing fixture. Currently, there are many different lamp options in the market, with various form factors, light distributions, and wattage equivalency claims, some of which are not optimized for use in all existing fixtures.

This document specifies the performance, operational, physical, and electrical characteristics for reporting as part of any LED Lamp specification sheet for HID replacement and retrofit applications. Manufacturers have the flexibility to provide supplemental information in order to further assist users. Standardizing the features and performance data to be reported by manufacturers is intended to enable comparisons of these LED light sources.

For information related to compatible ballasts or drivers (as applicable), internet addresses, or hyperlinks within the specification sheet to supporting documents is an accepted practice.

## 1. Scope

The purpose is to standardize LED Lamp specification sheets for HID Replacement and Retrofit Applications, as the means of communication of critical lamp characteristics such as:

- a. Intended use ballasts (if applicable)
- b. Reference circuit (if applicable)
- c. Identify input voltage requirements (for use with mains voltage)
- d. Light Distribution
- e. Other characteristics—may include physical dimensions and/or temperature ratings for operation.

This Standard will cover all types of HID replacement and retrofit applications using LED lamps. The minimum contents and format of the specification sheet will be provided. Manufacturers can include additional information.

This includes ballast driven (commonly referred to as Type A), mains voltage driven (commonly referred to as Type B), external driver driven (commonly referred to as Type C), or hybrid type replacements. Lamps that do not fit existing replacement sockets, i.e., new lamp configurations, are not part of this Standard. Required contents and format of the specification sheet are provided. Manufacturers can include additional information.

## 2. Normative References

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.

ANSI C78.40	<i>American National Standard—Electric Lamps: Specifications for Mercury Lamps</i>
ANSI C78.41	<i>American National Standard for Electric Lamps—Guidelines for Low-Pressure Sodium Lamps</i>
ANSI C78.42	<i>American National Standard for Electric Lamps—High-Pressure Sodium Lamps</i>
ANSI C78.43	<i>American National Standard for Electric Lamps—Single-Ended Metal Halide Lamps</i>
ANSI C78.53	<i>American National Standard for Electric Lamps—Performance Specifications for Direct Replacement LED (Light Emitting Diode) Lamps</i>
ANSI C81.61	<i>American National Standard for Electrical Lamp Bases—Specifications for Bases (Caps) for Electric Lamps</i>
ANSI/IES RP-16	<i>Nomenclature and Definitions for Illuminating Engineering</i>