



ANSI C81.61-2019

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American National  
Standard for Electric  
Lamp Bases—  
Specifications for Bases  
(Caps) for Electric  
Lamps



**National Electrical Manufacturers Association**  
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*American National Standard for  
Electric Lamp Bases—  
Specifications for Bases (Caps) for Electric Lamps*

Secretariat:

**National Electrical Manufacturers Association**

Approved: March 22, 2019

**American National Standards Institute, Inc.**

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**Foreword** (This foreword is not part of American National Standard ANSI C81.61)

In 1990 and 1991 the American National Standards (ANS) for lamp bases, lampholders and gauges were split into three separate standards to correspond with the IEC format. ANSI C81.61, *ANS for Electric Lamp Bases*, paralleled IEC 60061-1; ANSI C81.62, *ANS for Lampholders for Electric Lamps*, paralleled IEC 60061-2; and ANSI C81.63, *Gauges for Electric Lamp Bases and Lampholders*, paralleled IEC 60061-3. Also a fourth standard, ANSI C81.64, *Guidelines for Electrical Lamp Bases, Lampholders and Gauges*, was published to parallel IEC 60061-4 in 1993.

In 1996 the first IEC data sheets were adopted “as is” as Nationally Acknowledged International Standards and published as Supplement g to the existing C81.61, 62 and 63 standards. Now many more (if not most) ANSI base standard sheets are IEC sheets adopted as ANSI standards.

In 2003 a revision and consolidation of ANSI C81.61 was issued to include, first, a reference to all IEC base (cap) standard sheets adopted as ANSI standards. Second, standard sheets for a small number of bases used mainly in North America or not harmonized with IEC are found in Part II. Part III contained any United States deviations to the IEC standard sheets, which had been adopted as Nationally Acknowledged International Standards as published in IEC 60061-1. Part IV contained an informative annex on first versus third angle projection and related standards.

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## PART I

### General Information and Requirements

#### 1 Scope

This standard sets forth the specifications for bases (caps) used on electric lamps.

##### 1.1 Important Patent Disclaimer

At the time of publication, it is possible that some of the elements of this document may be the subject of patent rights. When this standard was approved for publication, the National Electrical Manufacturers Association (NEMA) did not know of any patent applications, patents pending, or existing patents. NEMA shall not be held responsible for identifying any or all such patent rights.

#### 2 Normative References

The following publications contain provisions which, 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 publications indicated below.

ANSI C81.62	<i>Lampholders for Electric Lamps</i>
ANSI C81.63	<i>Gauges for Bases (Caps) and Lampholders for Electric Lamps</i>
IEC 60061	<i>Lamp caps and holders together with gauges for the control of interchangeability and safety</i> <i>Part 1: Caps IEC 60061-1</i> <i>Part 2: Lampholders IEC 60061-2</i> <i>Part 3: Gauges IEC 60061-3</i>

#### 3 General Information

Two types of base standard sheets are identified in this standard, and both are listed in Table 1, *ANSI and IEC Lamp Base Standard Sheets*. All base types are listed in color to indicate their typical applications: blue for automotive and miniature; green for general lighting service, including common Edison screw base; red for fluorescent; and black for miscellaneous, including specialty, photo, projection, and studio stage applications.

For some bases, either no international standard exists or the international standard is not acceptable at this time. For such bases an ANSI standard sheet is included. These standard sheets are identified in Table 1, "ANSI and IEC Lamp Base Standard Sheets" under the column heading "ANSI C81.61". These standard sheets are found in Part I.

Certain standard sheets from International Electrotechnical Commission (IEC) standard 60061-1, *Lamp caps and holders together with gauges for the control of the interchangeability and safety Part 1: Lamp caps*, and its supplements, have been adopted as Nationally Acknowledged International Standards and constitute part of the *American National Standard for Lamp Bases (Caps)*. The standard sheets for these bases are not included but are identified in Table I, "ANSI and IEC Lamp Base Standard Sheets," under