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ANSI C78.390-1998
Revision of ANSI C78.390-1992

American National Standard

Method of Designation for Electric Lamps— Miniature and Sealed-Beam Incandescent Lamps

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ANSI C78.390-1998
Revision of ANSI C78.390-1992

AMERICAN NATIONAL STANDARD

***for electric lamps*:**

Method of Designation for Electric Lamps– Miniature and Sealed-Beam Incandescent Lamps

Secretariat
National Electrical Manufacturers Association

Approved May 12, 1998
American National Standards Institute, Inc.

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Revision of ANSI C78.390-1992

TABLE OF CONTENTS

1 Scope 1

2 Purpose 1

3 Normative References 1

4 Definitions 2

5 Description of a Designation 3

6 Criteria for Assignment of Designation for New Requests, Alternatives or Changes 5

7 Administration of this Standard 6

8 Miniature and Sealed-Beam Lamp Designation Request Form 8

9 Glossary and Instructions for Miniature and Sealed-Beam Lamp Designation Forms 8

ANNEX A Graphical Descriptions of Miniature Filament Type Mount Shape Designations A-1

ANNEX B Authorized Prefix Letters B-1

ANNEX C Authorized Suffix Letters C-1

ANNEX D Miniature and Sealed-Beam Designation Request Form D-1

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Revision of ANSI C78.390-1992

Foreword (This Foreword is not part of American National Standard C78.390-1998).

Suggestions for improvement of this standard will be welcome. They should be sent to the Secretariat, C78-7 Subcommittee, National Electrical Manufacturers Association, 1300 North 17th Street. Suite 1847, Rosslyn, VA 22209.

This standard was processed and approved for submittal to the American National Standard Institute (ANSI) by the Accredited Standards Committee C78 on Electric Lamps. The actual development of the standard was accomplished by the C78-7 Subcommittee on Miniature Lamps. Committee approval of this standard does not necessarily imply that all committee members voted for its approval. At the time of publication of this standard, the C78 Committee had the following members:

Al C. Rousseau, Chairman C78
Randolph N. Roy, Secretariat
Jeanne S. Evans, Coordinating Editor

Organization Represented	*Name of Representative*
Advance Transformer Company	Norm Grimshaw
Edison Electric Institute (Delegate)	William "Al" Maguire
General Electric Company	Cynthia Minshall
Illuminating Engineering Society	Rita M. Harrold
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	David H. Fox (Alt)
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Tom Knopp, Chairman C78-7

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OSRAM SYLVANIA Products, Inc.	David Fox
	Daniel Devir (Alt)
Philips Lighting Company	Al C. Rousseau

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AMERICAN NATIONAL STANDARD **ANSI C78.390-1998**

for electric lamps—

METHOD OF DESIGNATION FOR ELECTRIC LAMPS– MINIATURE AND SEALED-BEAM INCANDESCENT LAMPS

1 Scope

This standard describes a system for the designation of miniature and sealed-beam lamps. A form is provided for the use of lamp manufacturers to request a designation assignment, alternative, or change.

2 Purpose

2.1 The purpose of the designation system defined by this standard is to provide a nationally applicable and convenient lamp identification that may be used for both manufacturing and ordering purposes. The designation will ensure, for the user, the interchangeability of lamps that bear the same designation.

2.2 The lamp characteristics data given by a manufacturer on a Miniature and Sealed-Beam Designation Request Form (Request Form) forms the basis for the assignment of a designation. They have not been approved by the American Standards Institute (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 Normative References

3.1 The following standards 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 Standards are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ANSI C78.379-1991 (R1994), *Method for the Classification of the Beam Patterns of Incandescent and High-Intensity Discharge Reflector Lamps*

ANSI C79.1-1994, *Nomenclature for Glass Bulbs Intended for Use with Electric Lamps*

ANSI C81.61-1990 (R1996), *American National Standard for Electrical Lamp Bases*

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SAE J571, *Dimensional Specifications for Sealed-Beam Headlamp Units*

SAE J573, *Miniature Lamp Bulbs*

SAE J760, *Dimensional Specifications for General Service and Sealed Lighting Units*

SAE J1132, *142mm x 20mm Sealed-Beam Headlamp Unit*

IEC 60061, *Lamp Caps and Holders Together With Gauges for the Control of Interchangeability and Safety, Part 1: Caps*

3.2 Related Publications

The following publications are not standards. They are special reports available, at nominal cost, from the Administrator.

SR25d-1997, *ANS Assigned Miniature Lamp Codes*

SR26, *ANSI Assigned Sealed-Beam Lamp Codes*

4 Definitions

In addition to the general definitions given here, a glossary of items used in conjunction with a Request Form is presented in Section 9.

4.1 Alternate Design—A lamp with electrical characteristics the same or similar to an existing lamp, but utilizing a different major feature such as bulb shape or filament shape that does not affect interchangeability.

4.2 Designation Program—The procedures and requirements of this standard formulated to provide designations for lamps.

4.3 Discharge Forward Lighting—An automotive lighting system, providing forward illumination, comprised of the headlamps, discharge source, ballast/starting system, and interconnecting wiring.

4.4 Lamp Manufacturer—A manufacturer who produces finished lamps and offers them for sale.

4.5 Miniature Lamp—In general, a lamp of 30 volts or less, intended for various applications other than general lighting or photographic.[1]

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[1] It is difficult to formulate an all-inclusive definition for miniature lamps. There are numerous exceptions to the above definition.

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4.6 Pressed Glass Lamp—A reflector lamp, the bulb of which consists of two glass parts fused together, namely a metallized reflecting bowl and a lens cover forming an optical system.

4.7 Reflector Lamp—An incandescent or discharge lamp in which part of the bulb, of suitable shape, is coated with a reflecting material so as to control the light.

4.8 Sealed-Beam Lamp—A pressed glass lamp designed to give a closely controlled beam of light.

4.9 Sponsor—The originator of a lamp designation request form.

4.10 Telephone Type Lamp—A lamp having a T2 or smaller bulb and a telephone slide base. These lamps may be used in telephone switchboards or indicator panels on 6-120V circuits.

4.11 Variant —A lamp that is similar to an existing lamp and can be used interchangeably with the existing lamp in certain applications.

5 Description of a Designation

5.1 Designation for Lamps (Except Telephone Type Lamps)

The lamp designation shall consist of a one, two, three, or four digit number. Prefix and suffix letters or suffix numbers, preceded by a hyphen, may be used also. The designation shall have no significance other than defined prefix and suffix letters, but shall serve merely as an identifying symbol.

Other than the use of hyphens, as defined in this standard, there shall be no spaces, separators or other undefined symbols used in a designation.[2]

5.1.1 Basic Number

The basic number shall be composed of one, two, three, or four digits. A different number is assigned for each specifically different set of key electrical and physical characteristics.

[2] Although none of the lamp characteristics will be evident from the lamp designation, they may be determined by reference to a lamp manufacturer's catalog or to SR25 and SR26

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Key electrical and physical characteristics are:

- Rated voltage
- Current or wattage
- Mean spherical candela (Miniature Lamp)
- Approximate Initial Peak Beam
- Candlepower (Sealed-Beam Lamp)
- Rated life
- Bulb diameter
- Base designation
- Maximum overall length

5.1.2 Prefix Letters

A prefix letter(s), when used, shall precede the basic number of a designation without any intervening spaces or other separators. Prefix letters are found in Annex B.

5.1.3 Suffix Letters

A suffix letter(s), when used, shall follow directly after the basic number of a designation, without any intervening spaces or other separators. Suffix letters are found in Annex C.

The following list shows suffix letters that have been used in lamp designations. They are not recommended for future use.

K	Candelabra screw base
M	Miniature screw base
MB	Miniature bayonet base
NP	Nickel plated base

5.1.4 Suffix Numbers

A suffix number, preceded by a hyphen, shall follow the basic number, if needed. It may be used to indicate a variant from the basic lamp. Suffix numbers -1 through -4 are variants of the basic lamp. It may be necessary to consult with the manufacturer for the specific meaning.

If both a suffix letter and a suffix number are needed to describe a lamp; the suffix letter shall follow directly after the basic number, then this combination shall be followed by a hyphen and the suffix number.

5.2 Designation for Telephone Type Lamps

The designation for telephone type lamps shall consist of a one, two, or three digit number which may be followed directly by an arbitrary letter(s). This number represents

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the rated voltage of the lamp. A suffix number corresponding to the telephone slide base number also may appear in the designation. Numbers for the bases may be found in ANSI C81.61.

6 Criteria for Assignment of Designation for New Requests, Alternatives or Changes

6.1 A basic number, following the format of 5.1.1, shall be assigned only to a lamp whose characteristics are unique, not the same (or similar) to an existing set of key electrical and physical characteristics. A lamp for which a Request Form is filed shall be considered to have the same electrical and physical characteristics as one previously assigned if the characteristics are within the following tolerances:

- Voltage ±5%
- Current or wattage ±5%
- Mean spherical candela ±20%
- Rated life ±25%

All basic numbers shall be taken from a single series of numbers regardless of the class, miniature or sealed-beam. Assignment of numbers may be in random order.

6.2 Prefix letters shall be assigned as necessary to provide the information outlined in Annex B.

6.3 Suffix letters shall be assigned as necessary to provide the information outlined in Annex C. It is necessary for the manufacturer to provide advice on the Request Form as to the need for a suffix letter. These suffix letters may be assigned regardless of whether or not the designation without the suffix has been assigned and recorded.

6.4 Suffix numbers shall be assigned as necessary to indicate a variant from a basic lamp. Variants are variations in a lamp design that do not affect interchangeability. It is necessary for the manufacturer to provide advice on the Request Form as to the need for a suffix number. In the future, suffix numbers -5 and higher shall be assigned by the Administrator with consistent descriptions.

6.5 A designation for a telephone type lamp, in accordance with the format of 5.2, shall be assigned to a lamp that is uniquely different from an existing lamp. The numbers shall be assigned using the same numbers as the rated voltage of the lamp in question. The letter shall be assigned without significance. If appropriate for added clarity, the number of the telephone slide base used on that lamp may be added as a suffix.

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6.6 Criteria for Alternative Design

If the requested alternative design does not affect interchangeability as denoted by the key electrical and physical characteristics of 5.1.1, it is acceptable. A suffix letter supplied by the sponsor shall be acceptable if defined by the authorized list of Annex C.

6.7 Criteria for Change

If the requested change will not affect dimensional, optical, photometric, or electrical interchangeability, it is acceptable. Conversely if interchangeability is affected in any way, changing a key characteristic by more than the tolerances of 6.1, it shall be necessary to file for a new designation.

7 Administration of this Standard

7.1 Administrator

This standard shall be administered by the Secretariat of Accredited Standards Committee C78 through the offices of the National Electrical Manufacturers Association, 1300 N. 17th St., Suite 1847, Rosslyn, VA, 22209.

7.2 Participants in Miniature and Sealed-Beam Lamp Designation Program

Any domestic or foreign lamp manufacturer who wishes to obtain designation assignments to lamps they manufacture or market may participate by filing a Request Form with the Administrator.

7.3 Consulting Body

Subcommittee C78-7 of Accredited Standard Committee C78 shall maintain this standard. In addition, it shall serve as a consulting body to which the Administrator may bring questions and other matters needing resolution.

7.4 Procedure for Assigning and Recording Lamp Designations

7.4.1 When an electric lamp manufacturer requires a designation for a miniature or sealed-beam lamp, they shall file with the Administrator a fully completed Miniature and Sealed-Beam Lamp Designation Request Form (see Section 8) in duplicate. The box at the top of the form relating to a new designation should be checked. The completed Request Form shall list such characteristics as are necessary to describe a lamp sufficiently to allow the assignment of a designation in accordance with this standard.

A lamp drawing shall accompany each Request Form describing a lamp which is not a straightforward combination of a standard bulb and a standard base. If a special base is used, the drawing should provide sufficient detail to ensure interchangeability.

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7.4.2 The Administrator can reject any Request Form that provides insufficient information.

7.4.3 Assignment of a designation shall not be given over the telephone. Requests to reserve designations for future use, shall be made in writing by letter. They shall be accepted and kept current for a period of one year. The reservation(s) shall be renewable at one-year intervals. If a renewal request is not received from the manufacturer within a reasonable amount of time, the Administrator shall cancel the reservation after he notifies the manufacturer of his intent to do so.

7.4.4 Upon receipt of a completed Request Form, the Administrator shall take one of the actions outlined in 7.4.4.1 through 7.4.4.3.

The Administrator shall search the records to determine if the information on the Request Form defines a unique set of characteristics, per the criteria of Section 6.

7.4.4.1 If a designation has not been assigned to a lamp having the same characteristics as those given in the Request Form, the Administrator shall assign and record a designation for such a lamp and shall promptly inform the requesting manufacturer of the designation assigned.

7.4.4.2 If a designation has already been assigned to a lamp having the same characteristics based on the criteria of section 6, as given in the Request Form, the Administrator shall inform the filing manufacturer of the existing designation that may be used for his product.

7.4.4.3 If a lamp is on record with characteristics almost identical to those on the Request Form and has been assigned a designation (released or not, in accordance with 7.4.5), the Administrator shall circulate the new Request Form and seek advice from the manufacturers participating in the miniature lamp designation program as to whether the same or a new designation shall be recorded.

7.5 Procedure for Assigning and Recording an Alternative Design, or a Change in Characteristics of an Existing Lamp Designation

7.5.1 When a lamp manufacturer desires to record an alternate design, or a change in design of an existing lamp, they shall file with the Administrator a Miniature and Sealed-Beam Lamp Designation Request Form (see Section 8) in duplicate. The appropriate box at the top of the form should be checked. The completed form shall list only the characteristic(s) being changed.

7.5.2 Upon receipt of a request for an alternative design the Administrator shall send copies of it to the members of Subcommittee C78-7 for review.

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Revision of ANSI C78.390-1992

If no objections are received by the Administrator within 60 days after circulation of copies, the alternative design shall be listed.

7.5.3 Upon receipt of a request for an alternative design the Administrator shall send copies to members of Subcommittee C78-7 and all others participating in the miniature lamp designation program for their review, in the same manner as 7.5.2.

If no objections are received by the Administrator within 60 days after circulation of copies, the file shall be updated accordingly and the Administrator shall notify the participants that the change has been made.

7.6 Resolution Procedure

If a participant does not concur with a circulated Request Form covering a new design or a proposed alternative or change, the Administrator should be notified within the aforementioned 60 day period. Matters that are not resolved by the Administrator shall be referred to Subcommittee C78-7 for resolution. The Administrator shall then notify participants that an objection has been filed and no designation will be assigned to the request, nor will any change in recorded characteristics be made pending resolution later.

8 Miniature and Sealed-Beam Lamp Designation Request Form

The official Request Form is presented in its entirety in Annex D.

The glossary and instructions for the form, Section 9, provide the necessary guidance for proper entry of the required data on the form.

9 Glossary and Instructions for Miniature and Sealed-Beam Lamp Designation Forms

The information in this section defines the terms used on the Miniature and Sealed-Beam Lamp Designation Request Form and explains the entries to be made thereon. The following item numbers in parentheses refer to the corresponding lines of the Request Form.

(1) Bulb Designation

(1.1) Bulb shape designations as defined in ANSI C79.1.

(1.2) Bulb diameter shall be shown using customary (English) units, as defined in ANSI C79.1, with the equivalent metric diameter shown in parentheses.

(2) Finish—Describes the final appearance of the bulb as: Clear, Frosted, Green, etc.

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(3) Lens—A term describing the lens portion of a sealed-beam lamp. The following names are used to identify the general types of lens used. More than one term may be listed.

Clear (or very lightly stippled)	Flat
Stippled	Fluted
Aiming pads	Elevated Dome

(4) Reflector—A term describing the size of the reflector portion of a sealed-beam lamp. A shortened form of one of the following common reflector descriptions, or description of a special reflector, should be used.

7 inch (178 mm) diameter, Type 1 per SAE J571, for headlamp
5-3/4 inch (146 mm) diameter, Type 2 per SAE J571, for headlamp
5-3/4 inch (146 mm) diameter, per SAE J760, or general service
4-1/4 inch (114 mm) diameter, per SAE J760, for general service
4 x 6-1/2 inch (100 x 165 mm) rectangular, Type 2A per SAE J571
5.6 x 7.9 inch (142 x 200 mm) rectangular, Type 2B per SAE J1132

(5) Base Designation—A term as defined in ANSI C81.61 or SAE J573. For added clarity, it is preferred that the IEC base designation be entered at this point on the form. This IEC designation is uniquely formulated to fully explain the type of base, size, pin positions, etc. See IEC 61-1.

If the proper IEC designation, C81 name or SAE name is unknown or unassigned, a note pertaining to a "special" base may be entered. Such an entry shall be related to the drawing provided as required in 7.4.1.

(a) Lead Length and diameter for wire terminal lamps shall be specified in both inches and millimeters.

(b) Number of Terminals for sealed-beam lamps

The following descriptive terms shall be used; more than one term may be used. The number of terminals shall also be listed.

Lug
Screw terminal with staked screw
Slip on terminal
Mogul end prong
Waterproof
Screw terminals with removable screw

(6) Filament Type—A coded term which identifies a particular type of filament and mount shape. It shall consist of a letter prefix, which indicates the type of filament, and a number or number/letter combinations indicating the filament

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arrangement on the lead wires and supports when the latter are used. Applicable prefix letters include:

S Straight
C Coiled
CC Coiled coil
FC Flat coil

Filament type should be indicated by one of the letter/number codes on the form shown in Annex A, if significant to lamp interchangeability.

(7) Internal Atmosphere—A term to designate one of the following options:

Vacuum
Gas

(8) Light Center Length (LCL)—The nominal distance from the center of the light source to the reference plane of the base. LCL shall be shown in both inches and millimeters. Reference planes on common bases, in relation to a lamp in its base-down position, are noted below.

BA9 Miniature bayonet—top of pins
BA15 Candelabra bayonet—top of pins
BAY15 Indexing candelabra bayonet—top of pin nearest bottom contacts
E5 Midget screw—center of bottom contact
E10 Miniature screw—center of bottom contact
E12 Candelabra screw—center of bottom contact
E17 Intermediate screw—center of bottom contact
P13.5 Miniature flanged—top of bosses on the flange
P30 Candelabra prefocus—bottom of bosses on prefocusing collar
SX4 Submidget flanged—top of flange
S5.7 Midget grooved—center of groove
SX6 Midget flanged—top of flange
Tab - center of hole in tab
W2.1x4.9 W-1 subminiature wedge—center of notch
W2.1x9.2 W-2 wedge—center of notch

(9) Maximum Overall Length (MOL)—The maximum distance from the top of the bulb to the bottom of the base. For wire terminal lamps, the MOL is the maximum length of the glass parts. It shall be shown in both inches and millimeters.

(10) Maximum Seating Plane (MSP) for sealed-beam lamps—The distance from the seating plane to the rear of the base. The seating plane is that part of the reflector intended to lie within or seat against the housing.

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(11) Lamp Drawing presents a pictorial view of the finished lamp. Such a drawing is required to be attached per 7.4.1.

(12) Rated Voltage—The voltage marked on the lamp. Common rated voltages in the automotive field area 6V, 12V and 24V.

(13) Test Voltage—The voltage at which the lamp is operated, if different than rated voltage, to determine amperes, candelas, and life ratings, unless exception is noted on the
Request Form.

(14) Current or Wattage

For miniature lamps:

(a) Rated current—The current, in amperes, flowing when the lamp is operated at the rated or test voltage.

(b) Rated wattage—The average power, in watts, consumed by the lamp when it is operating at the rated or test voltage.

For sealed-beam lamps:

(a) Rated current—The current, in amperes, flowing when the lamp is operated at the rated or test voltage.

(b) Rated wattage—The average power, in watts, consumed by the lamp when it is operating at the rated or test voltage.

(15) Mean Spherical Candelas, usually apply to miniature lamps only - The average value of the luminous intensity (unit: candela) in all directions for a source.

(16) End Luminance

(a) End Footcandles—That portion of the total light output of a lamp through a specific orifice, if any, falling on a cell placed at a specified distance from the end of the lamp.

(b) Distance end of cell to end of lamp.

(c) Orifice diameter.

(17) Approximate Initial Peak Beam Candlepower (AIPBC)—The amount of light at the point of highest intensity in the beam. The unit of measurement is the candela. Using peak beam candlepower and the beam spread to 10% of that

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peak beam candlepower, an indication of light intensity and beam size can be made.

Historically, this term also has been known as approximate initial maximum beam candlepower.

(18) Beam Spread—The angle between the 10%-of-peak-beam-candlepower points of a sealed-beam lamp (beam spread to 10%). The beam spread to 10% of peak beam candlepower is an approximate measure of the height and width of the beam pattern. The unit of measurement is the degree.

This angle is not precise and is only intended to classify beam pattern sizes in a general way. Historically, this also has been known as approximate beam spread to 10% of maximum beam candlepower. It is used here in contrast with the definitions of ANSI C78.379.

(19) Rated Life at test voltage—The life declared by the manufacturer. Such a rating refers to the mean of a distribution of lives from a sample of lamps representing the manufacturers entire production. Approximately 50% of the sample will fail below the rating and 50% will fail above the rating. Such a rating is based on testing under static controlled laboratory conditions. Specific details of the test voltage should be noted on the Request Form.

(20) Special Characteristics is an open format to provide for entry of any information that may assist in the assignment of a designation.

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ANNEXES

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Revision of ANSI C78.390-1992

ANNEX A
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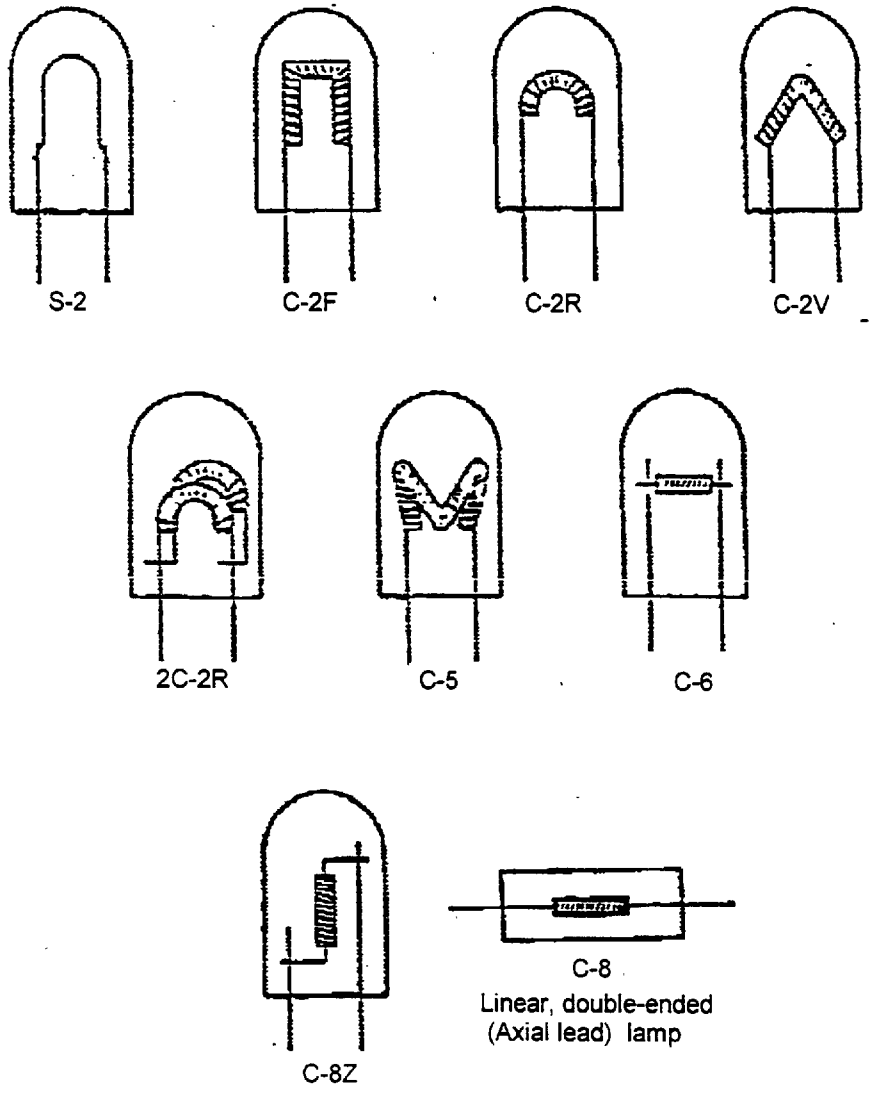
Graphical Descriptions of Miniature Filament Type Mount Shape Designations



NOTES:
1. Designation "C" as shown, indicates single coil; "S" indicated straight wire. An alternative designation
   is "CC", for coiled-coil.
2. Unless otherwise indicated, all mounts are shown relative to a lamp in its base-down position.

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ANNEX B
(normative)

The following authorized prefix letters, when used, shall have the significance shown.

HPR	Halogen Prefocus Flashlight Lamp
KPR	Krypton Prefocus Flashlight Lamp
H	Halogen
HP	Halogen Plastic Sealed-Beam
PR	Prefocused Flashlight
Q	Sealed-Beam Lamp with tungsten halogen quartz inner bulb
PC	Lamp for mounting in printed circuit board

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ANNEX C
(normative)

The following authorized suffix letters have the significance shown and shall be used to show a variation from a lamp whose designation has no suffix letters. Such variations indicate special lamp features but not necessarily features that would affect interchangeability.

A	Amber coating
AA	All amber coated Hi-dome lens of sealed-beam lamp
AB	All blue coated Hi-dome lens of sealed-beam lamp
AF	All frosted (outside)
AG	All green coated Hi-dome lens of sealed-beam lamp
AS	Aged and selected to specific mean spherical candela tolerance
AS15	Candela tolerance of ± 15%
AS25	Candela tolerance of ± 25%
B	Blue coating
BC	Brass contact
BL	Bent lead
CB	Ceramic blue
D	Lead wires in downward position
E	Extended leads from wedge base
G	Green coating
IF	Inside frosted
K	Krypton
NA	Natural amber
NR	Natural ruby
PS	Pin socket
Q	Qualified to MIL-L-6363
R	Red coating
S	Shielded filament
SB	Silvered bowl (reflectorized)
SR	Stained red
U	Miniature lamp, lead wires in upward position
V	Sealed-beam lamp, unbased ferrules only
W	White coating
X	Variant
Y	Yellow coating

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ANSI C78.390-1998
Revision of ANSI C78.390-1992

ANNEX D
(Normative)

Secretariat C78
NEMA
1300 North 17th Street, Suite 1847
Rosslyn, VA 22209

FOR SECRETARIAT USE ONLY
Date: _____
Assigned
Designation: _____

MINIATURE AND SEALED-BEAM DESIGNATION REQUEST FORM
Attention: Secretariat, Accredited Standards Committee C78 on Electric Lamps

Note: A lamp designation code may be issued by the Secretariat if the requirements of C78.390 are satisfied. It is understood that the code is for the convenience of the lighting industry and does not constitute a standard of ANSI (American National Standards Institute).

_____ Request for new designation

_____ Notification of alternate design not affecting interchangeability. (Fill in only the characteristics being changed. Final acceptance only after review by Subcommittee C78-7.)

_____ Notification of change in design. (Fill in only the characteristics being changed. Final acceptance only after review by Subcommittee C78-7.)

Reason _____
_____

If no objections are received within 60 days, change will be considered permanent.

(All items shall be completed in accordance with American National Standard for Electric Lamps—Miniature and Sealed-Beam Incandescent Lamps—Method of Designation, ANSI C78.390-1998)

_____Miniature _____Sealed-Beam
(Fill in where applicable)

PHYSICAL CHARACTERISTICS

1.	Bulb Designation	_____	_____
1.1	Bulb Shape Code	_____	_____
1.2	Bulb Diameter, Customary (Metric in parentheses)	_____ ( )	_____ ( )
2	Finish	_____	_____
3	Lens	n/a	_____
4	Reflector	n/a	_____

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ANSI C78.390-1998
Revision of ANSI C78.390-1992

5*	Base Designation (IEC code preferred)		
	(a) Lead Length	mm	mm
	(b) Number of Terminals	n/a	
6	Filament Type(s) (Note 1)		
7	Internal Atmosphere		
8	Light Center Length (LOL)	mm	mm
9	Maximum Overall Length (MOL)	in mm	in mm
10	Maximum Seating Plane (MSP)	n/a	mm
11	Lamp Drawing Included (w/ details of any special base)	yes	no

LAMP ELECTRICAL OPERATING CHARACTERISTICS

12*	Rated Voltage		
13	Test Voltage (Note 1)		
14*	Current or Wattage (Notes 1,2)		
	(a) Nominal	/	/
	(b) Maximum	/	/
15*	Mean Spherical Candela		n/a
16	End Luminance		
	(a) End Footcandles		n/a
	(b) End of Cell to End of Lamp	mm	n/a
17*	Approximate Initial Peak Beam Candlepower		
	(Note 1)	n/a	
18	Beam Spread (Note 3)		
19*	Rated Life (Note 1)	hours	hours
	@ volts (Note 1)	Vac Hz	Vac Hz
	or	Vdc	Vdc

20 SPECIAL CHARACTERISTICS _____

LAMP MANUFACTURERS NOTES

A.	Reserved or Requested Designation	
B.	Lamp is Interchangeable with Lamp Designated	
C.	Date of Request	
D.	Name of Manufacturer	
E.	Address of Manufacturer	
F.	Telephone Number of Submitter	
	Fax number	
	E-Mail Address	
G.	Signed	

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ADMINISTRATOR'S ACTION

H. Assigned Designation ..... _____

I. Rejection: due to ..... _____

J. Of record:

(1) Same characteristics as lamp designated .....

(2) Characteristics very close to lamp designated .....

New designation withheld pending further advice from manufacturers.

K. Acknowledgment Only.

Uncirculated Designation Exists .....

L. Initials and Date _____

Notes:

1. For two-filament miniature lamps, show values in the following format: major filament/minor filament. For two-filament sealed-beam lamps: upper beam/lower beam.
2. For miniature lamps, amperes are normally listed. For sealed-beam lamps, watts are normally listed. Otherwise, the number should be followed by an A or a W, as appropriate.
3. Optional

• **Key Characteristics**

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