American National Standard

ANSI C79.1-1994

Nomenclature for Glass Bulbs– Intended for Use with Electric Lamps

NEMA

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American National Standard

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ANSI C79.1-1994

American National Standard

for Nomenclature for Glass Bulbs— Intended for Use with Electric Lamps

Secretariat
National Electrical Manufacturers Association

Approved March 24, 1994
American National Standards Institute

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Foreword (This Foreword is not part of American National Standard C79.1-1994)

This American National Standard, Nomenclature for Glass Bulbs Intended for Use with Electric Lamps, C79.1-1994, describes a system of nomenclature that provides designations for glass bulbs used as the envelopes for electric lamps.

Suggestions for improvement of this standard will be welcome. They should be sent to the Secretary of Committee C79. National Electrical Manufacturers Association, 2101 L Street, NW, Washington, DC 20037.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Nomenclature for Glass Bulbs Intended for Use with Electric Lamps, C79. Committee approval of the standard does not necessarily imply that all committee members voted for its approval.

The members of the Committee at the time of Committee approval of this publication were:

V. H. Schofield, Secretariat

Organization Represented	*Name of Representative*
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GE Lighting	Ted A. Pickett
GTE Products Corporation	Bruce R. Simson
Philips Lighting Company	Al Rousseau
Wagner Electric	Donald H. Freeman

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Nomenclature for Glass Bulbs Intended for Use with Electric Lamps

1 Scope

This standard describes a system of nomenclature that provides designations for glass bulbs used as the envelopes for electric lamps. This system is shown in customary (inch-based) units and SI (metric) units.

The nomenclature system is intended for application with bulbs that originate both as parts and as stock. As a part, a bulb is assembled directly into a finished lamp without major alterations. As stock, a bulb may be re-worked or altered during lamp assembly, while maintaining its basic identifying characteristics.

2 Normative references

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 Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

2.1 Related ANSI lamp standards

The bulb designations described in this standard are used as part of many of the individual lamp descriptions given in the following groups of lamp standards:

ANSI C78.20-1989, *Incandescent Lamps A, G, PS and Similar Shapes with E26 Medium Screw Bases*

ANSI C78.21-1989, *American National Standard for Incandescent Lamps, PAR & R Shapes*

ANSI C78.22-1989, *American National Standard for Incandescent Lamps, AG, PS and Similar Shapes with E39 Mogul Screw Bases*

ANSI C78.23-1989, *American National Standard for Incandescent Lamps, Miscellaneous Types*

ANSI C78.1-1992, C78.1a (1992), C78.1b (1994), *American National Standard Dimensional and Electrical Characteristics of Fluorescent Lamps—Rapid-Start Types*

ANSI C78.2-1978, C78.2a (1992), *American National Standard Dimensional and Electrical Characteristics of Fluorescent Lamps—Preheat-Start Types*

ANSI C78.3-1991, *American National Standard Dimensional and Electrical Characteristics of Fluorescent Lamps—Instant-Start and Cold-Cathode Types*

ANSI C78.40-1992, *American National Standard Specifications for Mercury Lamps*

ANSI C78.1340-1990, *American National Standard Miniature and Sealed-Beam Incandescent Lamps, Method of Designation for Electric Lamps*

ANSI C78.1341-1990, *American National Standard Mercury Lamps, 750-Watt, 120-Volt, Self-Ballasted*

ANSI C78.1342-1990, *American National Standard Mercury Lamps, 160-Watt, 120-Volt, Self-Ballasted*

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ANSI C78.1350-1990, *American National Standard for Electric Lamps - 400-Watt, 100-Volt, S51 Single-Ended High-Pressure Sodium Lamps*

ANSI C78.1351-1989, *American National Standard for Electric Lamps - 250-Watt, 100-Volt, S50 Single-Ended High-Pressure Sodium Lamps*

ANSI C78.1352-1990, *American National Standard for Electric Lamps - 1000-Watt, 250-Volt, S52 Single-Ended High-Pressure Sodium Lamps*

ANSI C78.1353-1990, *American National Standard for Electric Lamps -70-Watt, 52-Volt, S62 Single-Ended High-Pressure Sodium Lamps*

ANSI C78.1354-1990, *American National Standard for Electric Lamps - 100-Watt, 55-Volt, S54 Single-Ended High-Pressure Sodium Lamps*

ANSI C78.1355-1989, *American National Standard for Electric Lamps - 150-Watt, 55-Volt, S55 High-Pressure Sodium Lamps*

ANSI C78.1356-1988, *American National Standard for Electric Lamps - 150-Watt, 100-Volt, S56 High-Pressure Sodium Lamps*

ANSI C78.1357-1991, *American National Standard for Electric Lamps - 200-Watt, 100-Volt, S66 High-Pressure Sodium Lamps*

ANSI C78.1358-1988, *American National Standard for Electric Lamps - 35-Watt, S76 Single-Ended High-Pressure Sodium Lamps (includes supplement ANSI C78.1358a-1990)*

ANSI C78.1359-1988, *American National Standard for Electric Lamps - 50-Watt, S68 Single-Ended High-Pressure Sodium Lamps*

ANSI C78.1360-1990, *American National Standard for Electric Lamps - 310-Watt, 100-Volt, S67 Single-Ended High-Pressure Sodium Lamps*

ANSI C78.1375-1990, *American National Standard for Metal Halide Lamps, Specification for 400-Watt, M59 Lamp*

ANSI C78.1376-1990, *American National Standard for Metal Halide Lamps, Specification for 1000-Watt, M47 Lamp*

ANSI C78.1377-1990, *American National Standard for Metal Halide Lamps, Specification for 175-Watt, M57 Lamp*

ANSI C78.1378-1990, *American National Standard for Metal Halide Lamps, Specification for 250-Watt, M58 Lamp*

ANSI C78.1379-1990, *American National Standard for Metal Halide Lamps, Specification for 1500-Watt, M48 Lamp*

ANSI C78.1380-1988, *American National Standard for Mercury Lamps, Specification for 250-Watt, 120-Volt, Self-Ballasted Mercury Lamps*

ANSI C78.1381-1989, *American National Standard for Electric Lamps, Specification for 70-Watt, M85 Metal-Halide*

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2.2 The following standards are also related to bulb nomenclature:

C79.2-1954(R1987), *American National Standard Nomenclature for Molded Glass Flares Intended for Use with Electron Tubes and Electric Lamps*

IEC Pub. 887, *Glass Bulb Designation System for Lamps*

3 Definitions

3.1 Bulb

The outer envelope of glass or other transparent or translucent material enclosing the essential components of an electric lamp.

3.2 Approximate reference line

A construction line transverse to the axis through the neck of the bulb. It defines the approximate position at which the rim of a base, such as an Edison screw base, would meet the neck of a bulb. The sole purpose of the approximate reference line is to aid the establishment of technical definitions of bulb shapes. This line appears in figure 1 as a C-D line. No such line exists for pressed glass bulbs.

3.3 Base line or base circle

A diameter on the end portion of a bulb at the approximate point where the base seats. The concept of a base line or base circle is applicable only to double-ended tubular lamp bulbs.

3.4 Base line length

The distance between the two base lines.

4 Designations

4.1 General (Other than rectangular)

Glass bulbs shall be described by a designation consisting of the following sequence of letter and number symbols, without spaces in between, as follows:

a) A first letter symbol consisting of up to three letters which describes the bulb shape. The letter or letters of this symbol may in some cases be a basic shape letter symbol only and in other cases it may be a combination of a basic shape symbol and a modifier or modifiers. Basic shapes, modifiers and special shapes are defined in Clause 7.1.

b) A first number symbol which states the major diameter (nominal) of the bulb

c) A second letter symbol consisting of one or two arbitrary letters

d) A second number symbol using arbitrary numbers

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4.1.1 First letter symbol

The first letter symbol shall identify the shape classification to which the bulb belongs. The letter symbols that have thus far been established are described in Clause 7.1 and illustrated in Figure 1. If additional symbols are adopted, the letters I, O, Q, and U shall not be used.

4.1.2 First number symbol

The first number symbol shall indicate one of the following:

a) The nominal major diameter of that part of the bulb above the CD line

b) The nominal major diameter of a tubular bulb

c) The maximum diameter of a round PAR bulb

4.1.3 Second letter symbol

The second letter symbol shall serve to distinguish between bulbs having the same shape classification and major diameter but differing in other features above the CD line.

The letters of the second letter designation shall be assigned in alphabetical order beginning with A. The letters, I, O, Q, and U shall not be used. If more than 22 variations are encountered, a second series beginning ZA, ZB, etc., shall be used. The third series, if needed, shall be YA, YB, etc.

4.1.4 Second number symbol

The second number symbol shall serve to distinguish between bulbs alike in all respects above the CD line but differing below the CD line.

4.1.5 Fluorescent and PAR

Several variations exist in designating open-ended fluorescent bulbs and PAR-type glassware. Most manufacturers use the first letter and first number symbols designated in this standard, but vary in assignments of second letter and second number symbols. Instead of attempting standardization at this time, it has been decided to retain the various existing systems until the SI (metric) system is implemented.

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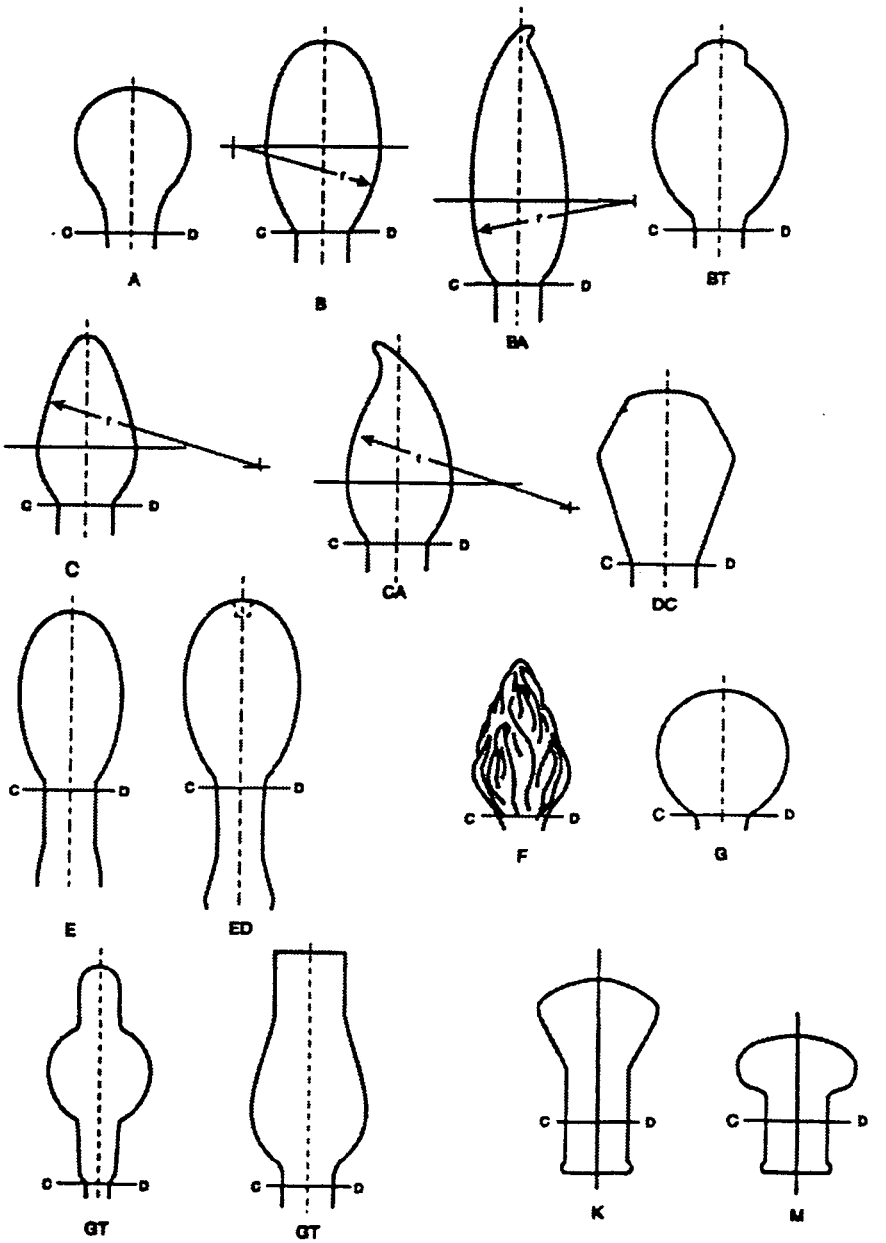


Figure 1 — Basic bulb shapes

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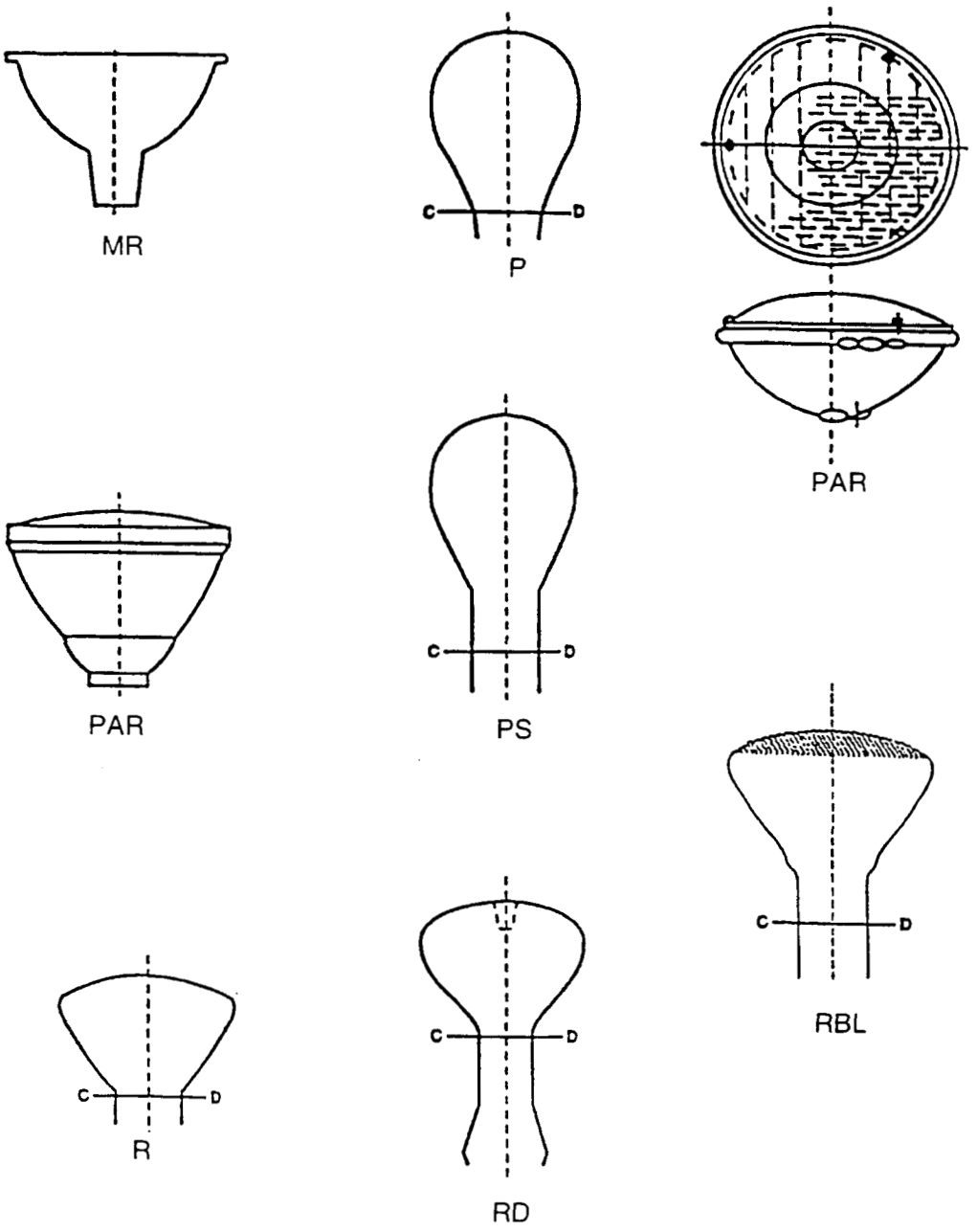


Figure 1 *(continued)*

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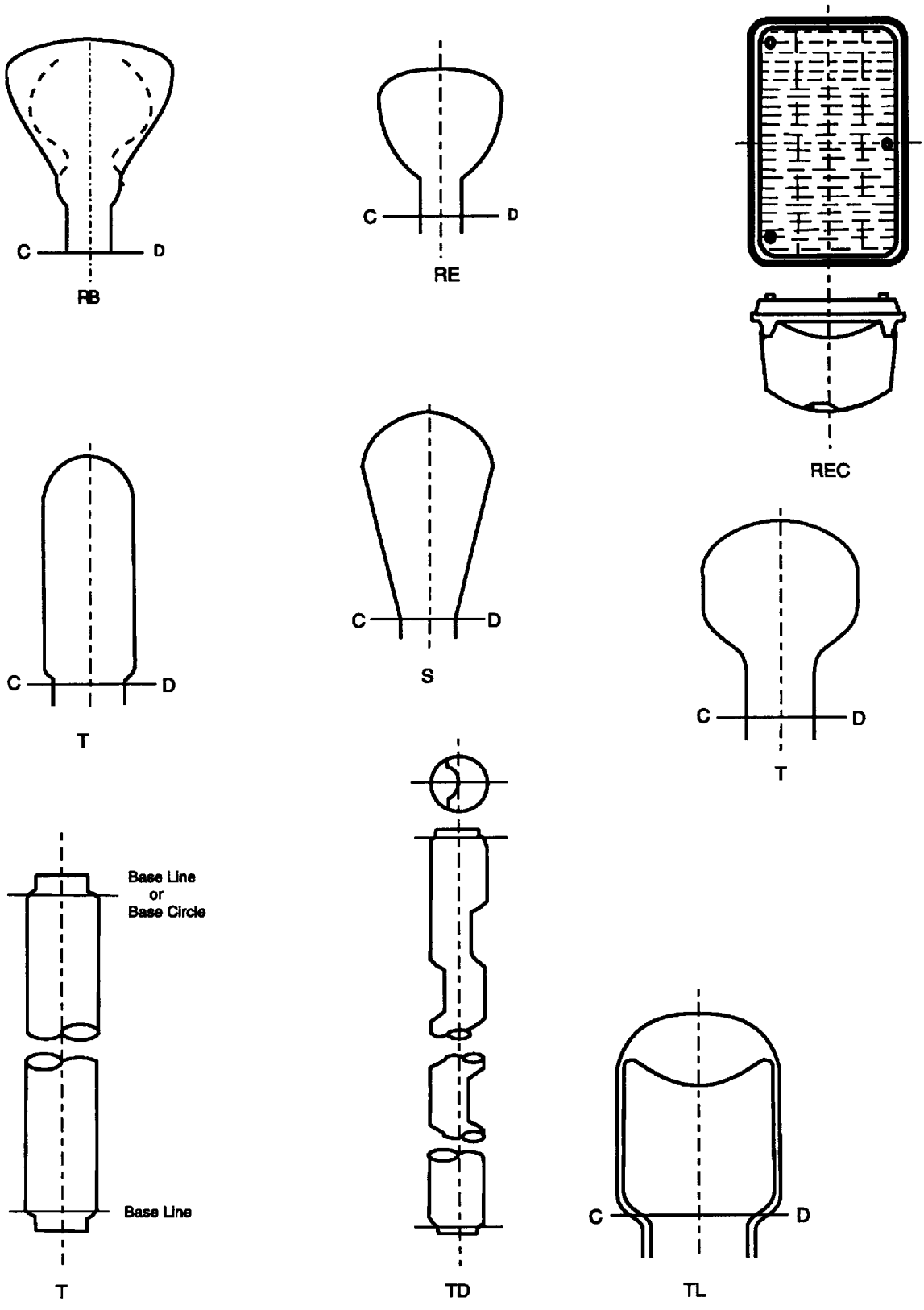


Figure 1 *(continued)*

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5 Units

Although it is an objective to harmonize bulb designations internationally, it is expected that a transition period will be necessary to change over to use of metric designation only. During this transition period either of two types of designations, customary or metric, or dual designation showing both units, may be used.

The relationship of customary, decimal and metric nomenclature for existing bulbs is shown in the Annex. Committee C79 shall develop any additional conversions that may be necessary.

5.1 Customary units

The nominal value of a bulb's major diameter shall be the basis of the bulb size unit. The unit shall be expressed in eighths of an inch, with fractions added when necessary. A tubular shaped bulb, for example, 1-1/4 inches (10/8ths) in diameter is called a T10 bulb.

Fractional units are added with regard to the following size ranges.

Bulb Size	Fractional Units
<1/4"	Eighths of an eighth of an inch, 1/64th.
1/4" to 3/4"	Fourths of an eighth of an inch, 1/32nd.
>3/4"	Half of an eighth of an inch, 1/16th.

An example of determining bulb size with fractional units in the 1/4" to 3/4" diameter range is as follows, for a nominal bulb diameter of 0.335 inch.

= 0.250 + 0.085
= 0.250 + 0.062 + 0.023
0.335 = 2/8 + 2/32 + 0.023/0.31
= 2/8 + 3/32 (rounded upward)
= 2 units + 3 fractional units
(As a T2-3/4 bulb, for example)

The optionaland interchangeable use of decimal equivalents, instead of fractions, is allowed for bulbs with fractional size designations. Any decimal shall be rounded to one significant place.

For the same bulb size as used in the preceding note, 0.0335 inch, the decimal size would be calculated as follows.

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= 0.250 + 0.085
= 2/8 + 85/125
0.335 = 2 units + 0.68 decimal units
= 2.7 (rounded upward)
(As a T2.7 bulb, for example)

For the same bulb size as used in the preceding note, 0.0335 inch, the decimal size would be calculated as follows.

5.2 SI (Metric) units

5.2.1 General

In metric designations the first number symbol shall consist of two numbers expressed in millimeters (to the nearest whole number) and separated by a diagonal line. The number to the left of the diagonal shall indicate the average major bulb diameter above the CD line; the number to the right of the diagonal shall indicate the average diameter of the bulb neck at the CD line.

5.2.2 Fluorescent bulbs

For fluorescent bulbs the two-number symbol described in 5.2.1 shall be used. The number to the left of the diagonal shall designate the bulb diameter in millimeters (to the nearest whole number); the number to the right of the diagonal shall designate the base line length to the closest tenth of a millimeter.

5.2.3 Round PAR

Only one number shall be used to designate round PAR-type glass bulbs. This shall be the dimension of the maximum diameter, expressed in millimeters (to the nearest whole number).

5.2.4 Rectangular PAR

Rectangular PAR-type glass bulbs shall be described by the letter symbol REC followed by two sets of numbers. The first number shall designate the dimension of the shorter side; the second number shall designate the dimension of the longer side. These two numbers shall be expressed in millimeters (to the nearest whole number) and shall be separated by the multiplication symbol (x).

6 Examples of designations

6.1 Customary units

See Table 1.

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Table 1 — Examples of designations in customary units

	General	Fluorescent	PAR	REC
Complete customary designation	A19C3	T12AG11	PAR38	NONE
First letter symbol	A	T	PAR	—
First number symbol	19	12	38	—
Second letter symbol	C	AG*	—	—
Second number symbol	3	11*	—	—

* Each manufacturer uses a different system.

6.2 SI (Metric) units

See Table 2.

Table 2 — Examples of designations in SI (metric) units

	General	Fluorescent	PAR	REC
Complete metric designation	A60/29C3	T38/1180AG11	PAR121	REC142x200
First letter symbol	A	T	PAR	REC
First number symbol	60/29	38/1180	121	142x200
Second letter symbol	C	AG*	—	—
Second number symbol	3	11*	—	—

* Each manufacturer uses a different system.

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7 Bulb shape classification

7.1 Basic shapes

The basic shape symbols are listed in Table 3. The descriptive information used in conjunction with the associated illustration in Figure 1 forms the definition of each shape.

Table 3 — Basic shapes

Letter Symbol	General Meaning	Explanatory Notes
A		A bulb shape having a spherical end section that is joined to the neck by a radius that: 1) has a center outside the bulb 2) has a magnitude greater than the radius of the spherical section 3) is tangent to both the neck and the curve of the spherical end section NOTE – These bulbs do not have any significant straight portion between the spherical end and the transitional radius into the neck.
B	Bulged	A bulb in which the curve making up the major portion of the side of the bulb has a radius greater than one-half the bulb diameter and a center in the plane of the maximum diameter.
C	Conical	A bulb consisting of a conical or near-conical end section, which is joined to the neck by an approximately hemispherical section; if the end section is not conical the curve making up the major portion of the side of the bulb has a center below the plane of the maximum diameter.
E	Elliptical	A bulb similar to a "B" shape but having the sides formed by a section of an ellipse.
F	Flame	A bulb resembling the flame of a candle having irregular flutes on the sides.
G	Globular	A bulb of essentially spherical shape.
K		A bulb which is similar in shape to a "M" bulb, except there is a conical transitional section between the major diameter and the neck rather than a curved section.

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Table 3 — Continued

M	Mushroom	A bulb having a spherically shaped end section blended, above the major diameter, to a smaller radius curve centered on the major diameter, which blends with a transition curve of approximately the same radius for joining the neck.
P		A bulb having a spherical end section and a conical mid-section, the sides of which are tangent to the curve of the spherical section.
R	Reflector	A bulb that includes a parabolic or elliptical section below the major diameter designed to receive a reflective coating so as to direct the beam of light.
S	Straight-Sided	A bulb having a spherically shaped end section, a conical lower section and an intermediate curve joining the two.
T	Tubular	A bulb that is mostly cylindrical in form.
MR	Multifaceted reflector	A curved focusing reflectorized bulb which may have a multifaceted inner surface that is generally dichroic coated. It is commonly used with a tungsten halogen light source and may be either open faced or sealed together with a glass lens. The lens, if any, may be either plain or configured.
PAR	Parabolic aluminized reflector*	A bulb formed by the sealing together during the lamp-making process of a pressed glass parabolic section and a pressed lens section. The lens section may be either plain or configurated.
REC	Rectangular	A "PAR" type bulb with a rectangular face.

* Aluminum is not the only material for use as a reflector coating.

7.2 Modifiers

The basic shape designations in Clause 7.1 may be modified by the addition, as a suffix, of one of the symbols listed in Table 4.

The descriptive information used in conjunction with the associated illustrations in Figure 1 forms the definition of each shape.

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Table 4 — Modifiers

Letter Symbol	General Meaning	Examples of Modified Shapes
A	Angular tip	CA and BA
B	Bulged section below the bulb's major diameter and above its approximate base line	RB See note 1
C	Conical section below the bulb's major diameter and above its approximate base line	CC See note 2
D	Dimple pointing inward or outward	ED, RD and TD
E	Elliptical section below the bulb's major diameter and above its approximate base line	RE See note 3
F	Flutes which twist around the outside and taper towards the tip of the bulb	CF
L	Lens end	TL
S	Tubular neck section below the bulb and above the approximate base line	PS See note 4
T	Tubular neck or top section	BT and GST

NOTES

1 "RB" indicates a reflector bulb having a bulged section above its base line. This shape is commonly called "BR."

2 "CC" indicates two conical sections, the sections being joined at their bases at the major diameter of the bulb. This shape was formerly referred to as "DC."

3 "RE" indicates a reflector lamp with an elliptical section below the major diameter. This shape is commonly called "ER."

4 "PS" was formerly employed as a basic shape letter symbol. In the context as a modified shape, the technical interpretation is the same.

8 Identification of bulbs for use in lamps

When a bulb designation is used as part of a lamp identification, only the bulb's first letter symbol and first number symbol shall be used. The following Subsections 8.1 and 8.2 describe such practice in both the customary and metric unit cases.

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8.1 Lamp description in customary units

If a bulb identification is needed as part of a lamp identification, first letter symbol together with the first number symbol of the bulb's designation, based on customary units, may become part of the lamp identification. Thus, using the examples in Table 1, customary-unit lamp identifications are derived from customary-unit bulb designations as follows:

Bulb Designation	As Used in a Lamp Identification
A19C3	A19
T12AG11	T12
PAR38	PAR38

8.2 Lamp description in metric units

If a bulb designation is needed as part of a lamp identification, the first letter symbol together with the first component of the first number symbol of the bulb's designation, based on metric units, may become part of the lamp identification. The slash and the figures to the right of the slash in the first number symbol are dropped. Then the letters SI in parenthesis are added to the lamp identification to distinguish it as a metric designation. Thus, using the examples in Table 2, metric-unit lamp identifications are derived from the metric-unit bulb designations as follows:

Bulb Designation	As Used in a Lamp Identification
A60/29C3	A60 (SI)
T38/1180AG11	T38 (SI)
PAR121	PAR121 (SI)
REC142x200	REC142x200

(SI) is not used in the lamp identification for REC bulbs because REC bulbs are available only in metric dimensions, and the (SI) notation would be redundant. The REC bulb designation and the REC lamp identification are identical.

The (SI) term is not used in most dual dimensioning situations employed in many lamp standards. The metric unit is usually placed in parenthesis ( ) to the right of the customary unit; i.e., A19 (A60), T12 (T38), PAR38 (PAR121) and further explanation about the information within the parenthesis is provided to the reader elsewhere in the lamp standard.

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ANNEXES

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Annex A
(informative)
Decimal equivalents and metric conversions of existing bulbs

It should be understood that these are not direct English-to-metric conversions. They are rounded to be in agreement with commonly-used international bulb designations. This annex includes the official customary, decimal, and metric designations for most commonly-used bulbs. Table 5 should be used as reference and conversion from one set of units to the other is deprecated.

Table 5–English-to-metric conversions

CUSTOMARY DESIGNATION	DECIMAL DESIGNATION	SI (METRIC) DESIGNATION	CUSTOMARY DESIGNATION	DECIMAL DESIGNATION	SI (METRIC) DESIGNATION
A15C3		A48/29C3	C7D1		C22/14D1
A15C4		A48/28C4	C7Z1		C22/14Z1
A15E1		A48/29E1	C7-1/2F3	C7.5F3	C24/14F3
A17A5		A54/29A5	C8A1		C25/14A1
A19A11		A60/29A11	C9-1/2Z1	C9.5Z1C	C30/17Z1
A19C3		A60/29C3	C13Y1		C41/28Y
A19X1		A60/29X1	E17B1		E54/29B1
A21C4		A67/30C4	E17C1		E54/29C1
A21G6		A67/30G6	E18Y1		E57/42Y1
A23C5		A71/30C5	E25Z1		E78/57Z1
A23D3		A71/32D3	E25Z2		E78/57Z2
A23E1		A71/32E1	ED18B1		ED57/41B1
A23Z1		A71/32Z1	ED231/2C1	ED23.5C1	ED75/41C1
A25X1		A79/35X1	ED23-1/2Z1	ED23.5Z1C	ED78/42Z1
B6E3		B19/14E3	ED28A1		ED90/52A1
B9A1		B29/15A1	ED28C1		ED90/51C1
B11B6		B34/14B6	ED28Y2		ED90/51Y2
B12W1		B38/14W1	ED37A1		ED118/52A1
B13C1		B41/29C1	ED37Y2		ED118/52Y2
B17A1		E54/29Z3A1	ER30Z1		RE95/34Z1
B17Z1		E54/29Z1	ER40A1		RE127/40A1
B17Z3		E54/29Z3	F10D7		F32/18D7
B21Z1		E66/32Z1	F10Z1		F32/19Z1
B23-1/2A1	B23.5A1	E75/42A1	F15F1		F48/29F1
B28-1/2Z1	B28.5Z1C	E90/51Z1	F15Y1		F49/28Y1
BA9-1/2A1	BA9.5A1	BA30/19A1	G6F2		G18/9F2
BA10A1		BA32/18A1	G7-1/2G2	G7.5G2	G24/14G2
BD17A1		ED54/31A1	G8H2		G25/10H2
BT25X1		BT80/51X1	G10H2		G32/16H2
BT28X1		BT90/51X1	G14B2		G44/15B2
BT28X3		BT90/51X3	G16-1/2K2	G16.5K2	G52/18K2
BT37Z5CA1		BT118/57Z5CA1	G18-1/2C10	G18.5C10	G59/29C10
BT46Z3		BT148/57Z3	G19C3		G60/24C3
BT56Z1		BT180/57Z1	G25K1		G79/30K1

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CUSTOMARY DESIGNATION	DECIMAL DESIGNATION	SI (METRIC) DESIGNATION
G25K2		G79/30K2
G25L2		G79/34L2
G30E5		G95/40E5
G30L3		G95/30L3
G30Y2		G95/35Y2
G40H3		G128/44H3
G40H4		G128/44H4
G40P4		G128/40P4
G40S1		G128/40S1
G40S2		G128/40S2
G40V1		G128/40V1
G40W3		G128/44W3
G48X1		G150/44X1
GT19W1		GT60/29W1
GT19Z1		GT60/32Z1
GT24Y1		GT76/34Y1
P25E2		P79/30E2
PS25N1		PS79/32N1
PS25P5		PS79/40P5
PS30D12		PS95/40D12
PS35C14		PS110/40C14
PS40C2		PS125/40C2
PS40C20		PS125/40C20
PS52C5		PS165/58C5
R12Z1		R38/16Z1
R20A2		R63/27A2
R20Y2		R63/28Y2
R25B		RB79/40B
R30B		RB95/40B
R30C4		R95/34C4
R30F1		R95135F1
R32-1/2Z3	RB32.5Z3	RB104/33Z3
R40G1		R125/40G1
R40R2		RD125/40R2
R40W3		R125/40W3
R52W1		R165/57W1
R57X1		R181/57X1
R58A1		R183/50A1
R80T1		R252/58T1
RB30A1		RB95/35A1
RB30G1		RB95/30G1
RB40J1		RB125/40J1
RB40Y2		RB125/40Y2
RB40Z4		RB125/40Z4
RBL38E1		RBL120/38E1
RBL38F1		RBL120/38F1

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CUSTOMARY DESIGNATION	DECIMAL DESIGNATION	SI (METRIC) DESIGNATION
RD40Y1		RD125/57Y1
RD40B1		RD125/40B1
RD40Z1		RD125/40Z1
RD52B1		RD165/57B1
RD57Y3		RD181/Y3
RD60V1		RD190/V1
RD60W1		RD190/52W1
RD80P1		RD252/57P1
S6G4		P19/14G4
S8G11		P25/15G11
S8L5		P25/15L5
S8W1		P25/15W1
S11L6		P34/16L6
S11R2		P34/16R2
S11T3		G34/17T3
S11X1		G34/19X1
S14W1		P44/28W1
S14Y1		P44/44Y1
T4.5ZG6		T14/15ZG6
T6R1		T19/15R1
T6-1/2BL1	T6.5BL1	T21/21BL1
T6-1/2BN1	T6.5BN1	T21/9BN1
T7G3		T22/16G3
T7K2		T22/17K2
T7M2		T22/16M2
T8F2		T25/26F2
T8M6		T25/16M6
T8V3		T25/17V3
T8Z4		T25/16Z4
T8-1/2A3	T8.5A3	T27/23A3
T8-1/2J2	T8.5J2	T27/27J2
T8-1/2J4	T8.5J4	T27/20J4
T10D8		T32/26D8
T11K1		T35/35K1
T12GP1		T38/38GP1
T12GP4		T38/38GP4
T12YT1		T38/38YT1
T14S1		T44/38S1
T14T1		T44/44T1
T14.5A1		T46/46A1
T16M1		T51/51M1
T19E1		T60/28E1
T20L5		T63/40L5
T20ZP5		T63/32ZP5
T21J2		T66/30J2

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FLUORESCENT		
T5		T16
T6		T19
T8		T25
T9		T29
T10		T32
T12		T38
T14		T44
T17		T54
MR		
MR11		MR35
MR16		MR64

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CUSTOMARY DESIGNATION	DECIMAL DESIGNATION	SI (METRIC) DESIGNATION
PAR		
PAR20		PAR63
PAR30		PAR95
PAR36		PAR114
PAR38		PAR121
PAR46		PAR146
PAR56		PAR178
PAR64		PAR203
REC		
NONE		REC100X165
NONE		REC142X200

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