

TECHNICAL REPORT

RAPPORT TECHNIQUE

Glass bulb designation system for lamps

Système de désignation des ampoules de verre pour lampes

[IEC TR 60887:2010](#)

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GLASS BULB DESIGNATION SYSTEM FOR LAMPS

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IEC TR 60887, which is a technical report, has been prepared by subcommittee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

This third edition cancels and replaces the second edition, published in 2003. It constitutes a technical revision. The reason for this new edition is the addition of a new bulb type designation and drawing.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
34A/1386/DTR	34A/1391/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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GLASS BULB DESIGNATION SYSTEM FOR LAMPS

1 Scope

This technical report describes a system of nomenclature that provides designations of the glass bulbs used as envelopes for electric lamps. The application of such designations is directed towards the descriptions of finished lamps.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1 bulb

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

2.2 approximate reference line

construction line transverse to the axis through the neck of the bulb defining the approximate position at which the rim of a cap, such as an Edison screw cap, would meet the neck of a bulb

NOTE The sole purpose of the approximate reference line is to aid the establishment of technical definitions of bulb shapes. This line appears in Figures 1 and 2 as a C-D line. No such line exists for pressed glass bulbs.

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3 Basic components of a designation

3.1 General

Glass bulbs should be described by a designation consisting of a sequence of letter and number symbols without spaces, as follows:

- a) a 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 4;
- b) a number symbol which states the major diameter (nominal) of the bulb, in millimetres.

NOTE In some countries, bulb diameter has been stated in multiples of 1/8 of an inch. This practice should be discouraged and preference given to millimetre units.

3.2 Rectangular bulbs

Rectangular glass bulbs should be described by the letter symbol REC followed by two sets of numbers. The first number should designate the dimension of the shorter side; the second number should designate the dimension of the longer side. These numbers should be separated by the multiplication symbol (\times). The dimensions should be in millimetres.

4 Bulb shape classification

4.1 Basic shapes

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

<i>Letter symbol</i>	<i>General meaning</i>	<i>Explanatory notes</i>
A		<p>A bulb shape having a spherical end section that is joined to the neck by a radius that</p> <ol style="list-style-type: none"> has a centre outside the bulb, has a magnitude greater than the radius of the spherical section, and is tangent to both the neck and the curve of the spherical end section. <p>NOTE These bulbs do not have any significant straight portion between the spherical end and the transitional radius into the neck.</p>
B	Bulged	<p>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 centre in the plane of the maximum diameter.</p> <p>This designation also applies when two radii are used, one for the lower part and a larger one for the upper part (candle type).</p>
C	Conical	<p>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 centre below the plane of the maximum diameter.</p>
E	Elliptical	<p>A bulb similar to a "B" shape but having the sides formed by a section of an ellipse.</p>
F	Flame	<p>A bulb resembling the flame of a candle having irregular flutes on the sides.</p>
G	Globular	<p>A bulb of essentially spherical shape.</p>
K		<p>A bulb which is similar in shape to an "M" bulb, except there is a conical transitional section between the major diameter and the neck rather than a curved section.</p>
M	Mushroom	<p>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>

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<i>Letter symbol</i>	<i>General meaning</i>	<i>Explanatory notes</i>
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.

4.2 Modifiers

The basic shape designations in Subclause 4.1 may be modified by the addition, as a suffix, of one of the modifier symbols listed below. The following descriptive information used in conjunction with the associated illustration in Figure 2 forms the definition of each shape.

<i>Letter symbol</i>	<i>General meaning</i>	<i>Examples of modified shapes</i>
A	Angular tip	CA, BA and BTA
C	Conical section below the bulb and above the approximate reference line	CC
D	Dimple pointing inwards or outwards	ED, RD and TD
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 reference line	PS
T	Tubular neck top section	BT and GST

4.3 Special shapes

The symbols for special shapes are listed below. These do not follow the rules of a basic shape symbol and modifier but are already well-established references. The following descriptive information used in conjunction with the associated illustration in Figure 3 forms the definition of each shape.

<i>Letter symbol</i>	<i>General meaning</i>	<i>Explanatory notes</i>
PAR	* Parabolic aluminized reflector	A bulb formed by the sealing together during the lamp-making process of a pressed glass parabolic reflector section and a pressed glass lens section. The lens section may be either plain or configured.
REC	Rectangular	A bulb having a rectangular face.
MR	Multifaceted reflector	A curved focusing reflectorized bulb which may have a multifaceted inner surface that is typically dichroic or aluminium 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.

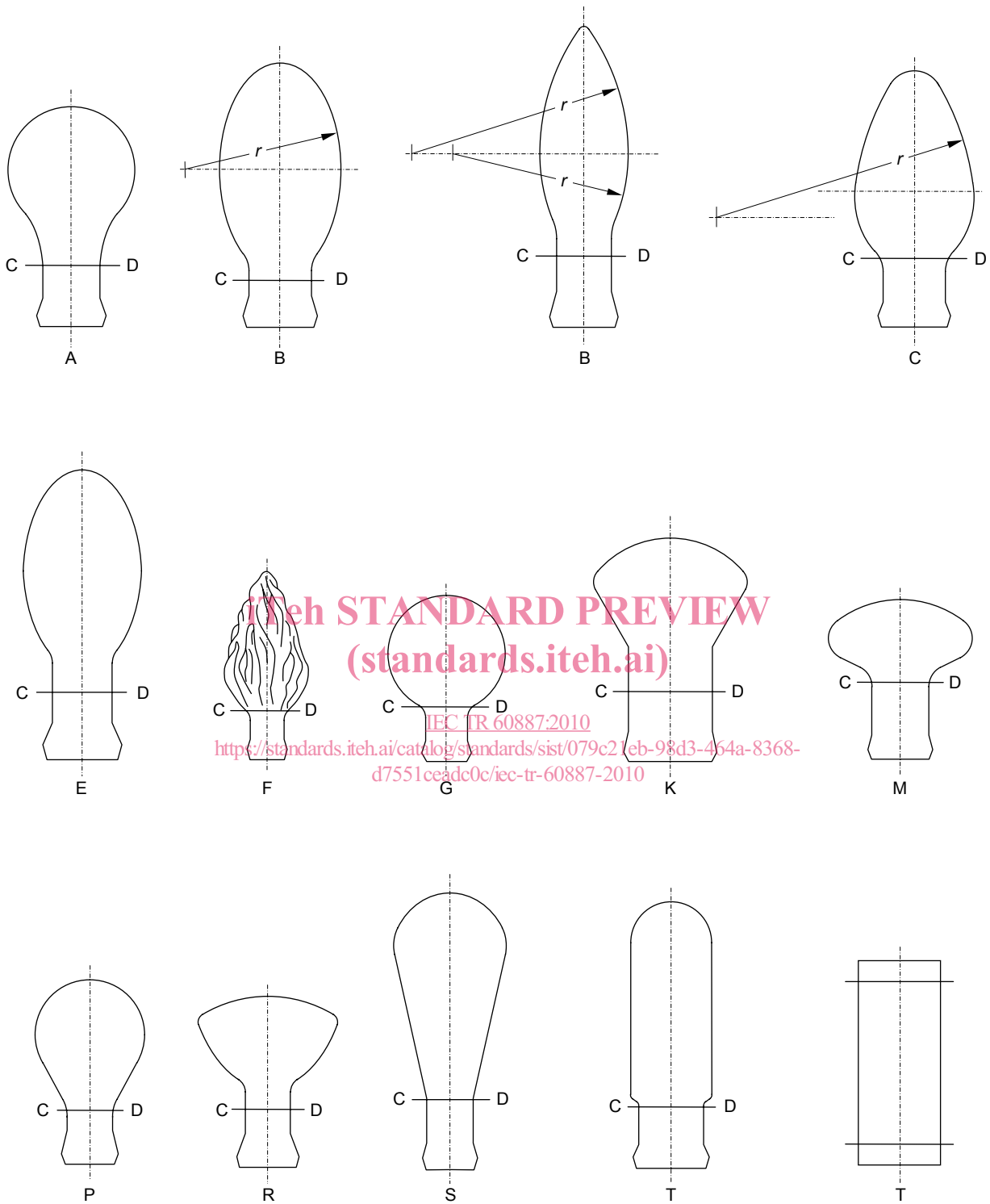
* Aluminium is not the only material for use as a reflector coating.

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5 Examples

The following are some typical designations together with their interpretation:

- A60: an "A" shape bulb with a nominal major diameter of 60 mm.
- T38: a tubular bulb with a nominal tube diameter of 38 mm.
- PAR121: a "PAR" shape lamp with a nominal major diameter of 121 mm.



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Figure 1 – Basic bulb shapes