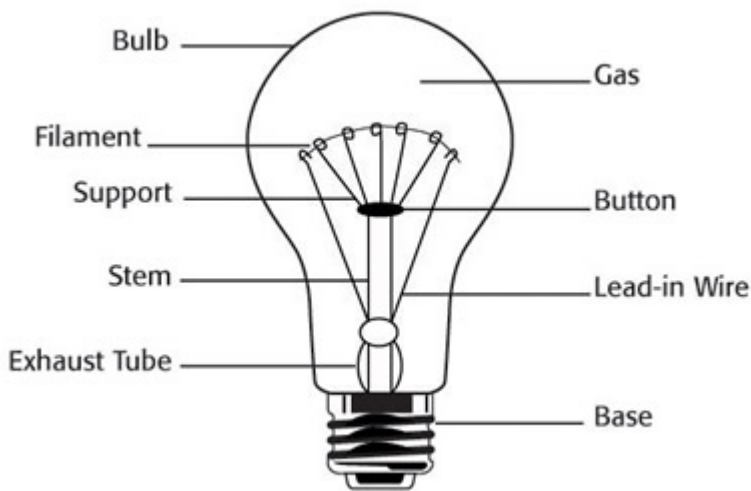




# Incandescent Lamps

## Lamp Construction

An incandescent lamp produces visible light by heating a filament to a very high temperature (+500°C), through an electric current flow. Tungsten is used in the making of the filament because of its high melting point and low rate of evaporation at extremely high temperatures. The filament is enclosed in a sealed glass jacket (glass bulb) which is filled with a mixture of inert gases at low pressure. The gas filling slows down the evaporation of the filament and increases the lamp efficacy.



## Incandescent Lamp Shapes

Incandescent lamps come in various shapes and sizes, all designated by a letter or letters followed by a number. The letter is to identify the lamp's shape while the numerical designation is to identify the diameter of the lamp in an eighth of an inch. For instance, a G-30 lamp is a globe shape lamp with 3-3/4" in diameter ( $30 \div 8 = 3\text{-}3/4$ ).

The most common shape for incandescent lamps and the one everyone knows is the A shape (A-19) - The A is only an arbitrary designation.

BR	=	Bulged Reflector
F	=	Flame
G	=	Globe
PAR	=	Parabolic Aluminium Reflector
PS	=	Pear, Straight Neck
R	=	Reflector
T	=	Tubular

# Lamp Shapes - Formes de lampes



A - 15

A - 19

A - 21

A - 23

Shape / forme A



B - 4

B - 8

B - 10

Shape / forme B



BR - 25

BR - 30

BR - 38

BR - 40

Shape / forme BR



C - 7

C - 7.5

C - 9.5

C - 11

C - 15

Shape / forme C



CA - 4.5

CA - 8

CA - 10

Shape / forme CA



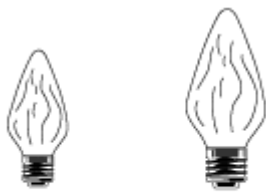
DC - 19

ER - 30

ER - 40

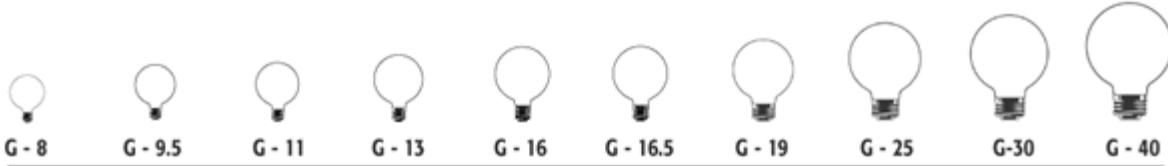
Shape / forme DC

Shape / forme ER

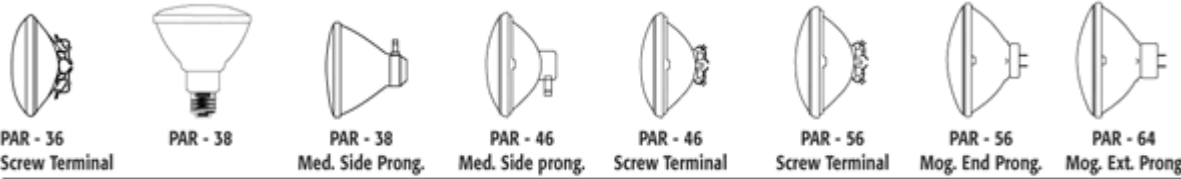


**F - 10      F - 15**

**Shape / forme F**



**Shape / forme G**



**Shape/ forme PAR**

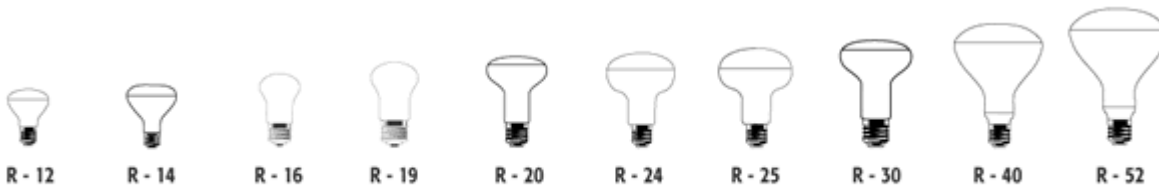


**Shape / forme PS**



**P - 8**

**Shape / forme P**



**Shape / forme R**



**S - 11      S - 14**

**Shape / forme S**



Starlight



STC8



STC 10

Shape / forme STC



T - 6



T - 6.5



T - 7



T - 8



Lumiline



Showcase



T - 10



Linestra



T - 19

Shape / forme T



Carbon Lamps / Lampes au carbone

**NOTE:** Drawings are not to scale. / Les illustrations ne sont pas à l'échelle

Filament Designations

The filament is the principal light producing element in a light bulb. Its design is crucial to ensure the lamp will operate as intended. It is made of tungsten, in various forms for many different uses. Tungsten replaces carbon (previously used as filament material) in the making of filament because carbon evaporates too rapidly at high temperature whereas tungsten combines the properties of high melting point and slow evaporation.

**Melting Points**

Tungsten	3410°C	6170°F
Carbon	3700°C	6692°F

Filament Temperature

Lamp	Watts	Filament	Temp.	Colour
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Type*		Type	Approx. (°C)	Temp. (°K)
S-14	10	C-9	3900	2450
A-19	25	C-9	4190	2550
A-19	40	C-9	4470	2770
A-19	60	CC-6	4530	2800
A-19	100	CC-6	4670	2870
A-21	150	CC-9	4710	2900
A-23	200	CC-9	4760	2930
PS-35	500	CC-8	4840	2960
PS-52	1000	CC-9	4980	3030
PS-52	1500	C-7A	5010	3070

**\* Standard 120V General Service Incandescent Lamps**

The most common filament shapes are identified by a letter or letters which indicates a straight or coiled wire.

C = Coiled Filament

CC = Coiled Coil Filament (or Double Coiled)

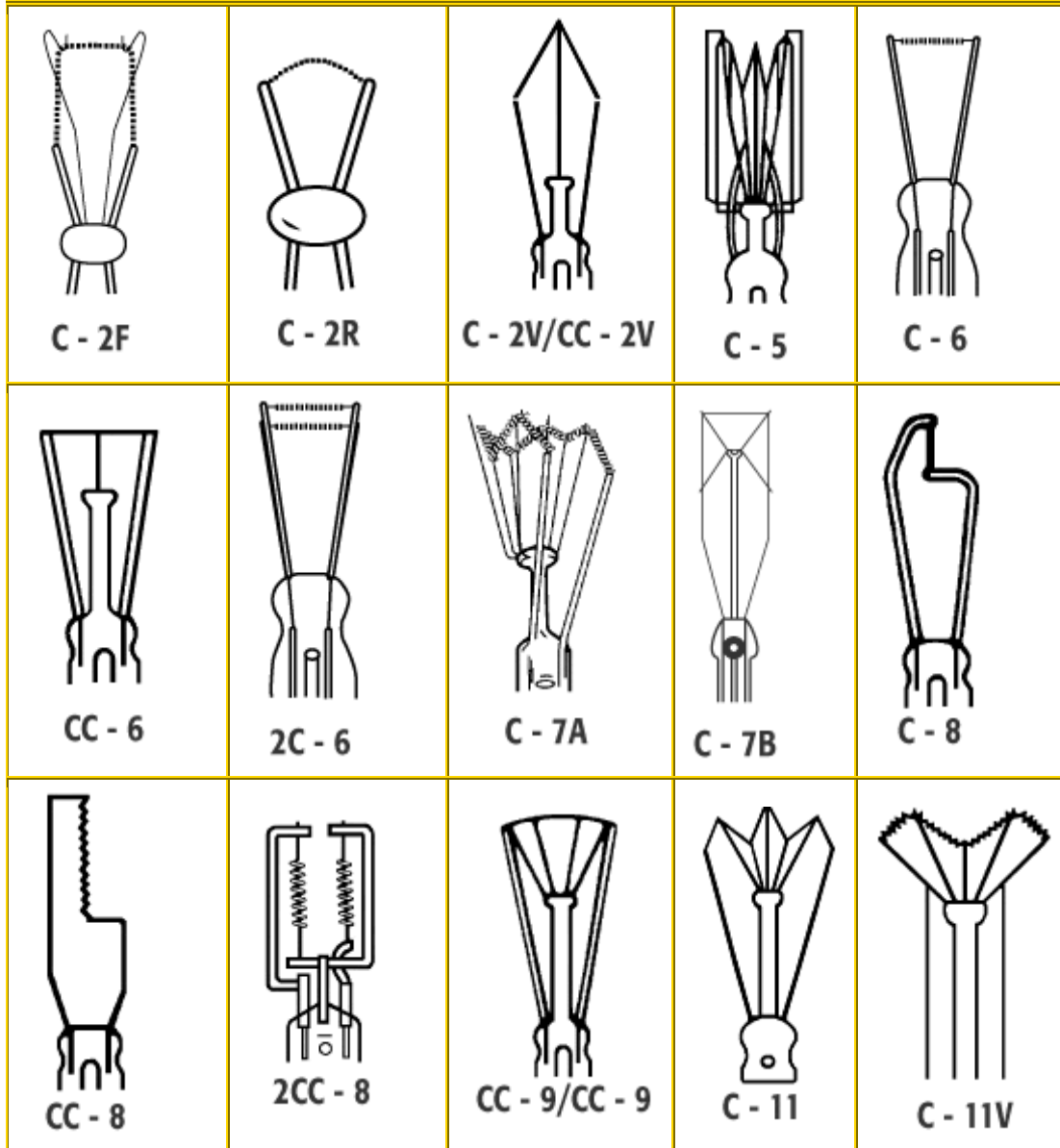
They are also identified by a number to indicate the shape of the filament and sometimes a 2nd letter specifying the arrangement on the supports. Today, most of the incandescent lamps use coiled (C) filament, but when increased efficacy is required, the use of coiled coil filament is usually considered, especially if the use of a reduced light-source size is needed.

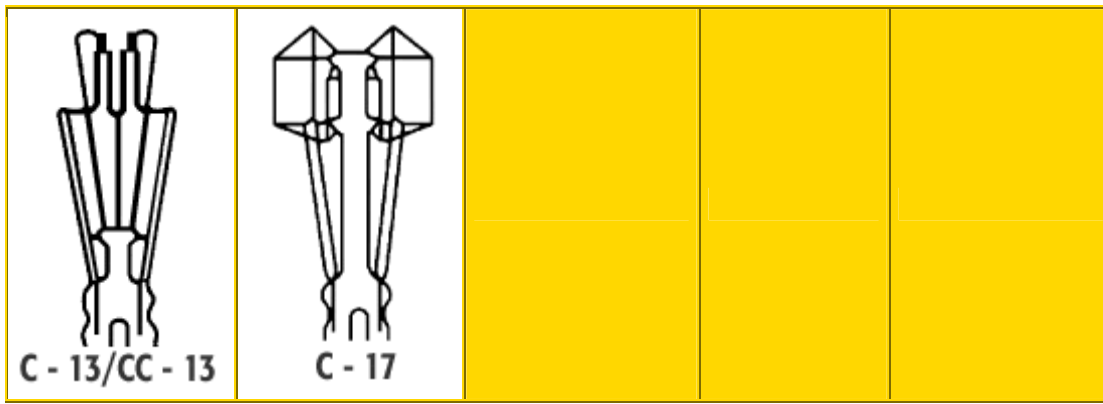
Frosted lamps diffuse light from the filament which results in a softer light. Frosted lamps do not absorb a measurable amount of light compared to clear lamps of equal power.

[Most Common Filament Description](#)

Designation	Description
C-2F	Short, coiled filament requiring two supports.
C-2R	Short, coiled curved filament requiring no support.
C-2V	Short, coiled filament requiring support.
CC-2V	Short, double-coiled filament requiring support.
C-5	Concentrated filament for small light sources.
C-6	Short, coiled filament requiring little or no support.
CC-6	Short, double-coiled filament requiring few supports.
2C-6	Two short, coiled filaments requiring little or no support mounted one on top of the other.
C-7	Long filament supported at the top for base up usage.
C-7A	Long filament supported at the top and at the base for universal usage.

C-7B	Long filament supported at the top and at the base forming a rectangular shape.
C-8	Coiled filament mounted in lamp axis. Can be extended like Lumiline lamps.
CC-8	Short, double-coiled filament mounted in the bulb axis.
2CC-8	Two short, double-coiled filaments mounted in the bulb axis.
C-9	Average length filament mounted in the bulb axis.
CC-9	Average length double-coiled filament mounted in the bulb axis.
C-11	Average length, concentrated filament. Well supported, "M" Shape.
C-13	Flat, very concentrated filament for projection equipment.
CC-13	Flat, very concentrated double-coiled filament for projection equipment.
C-17	Long filament requiring more support than usual.

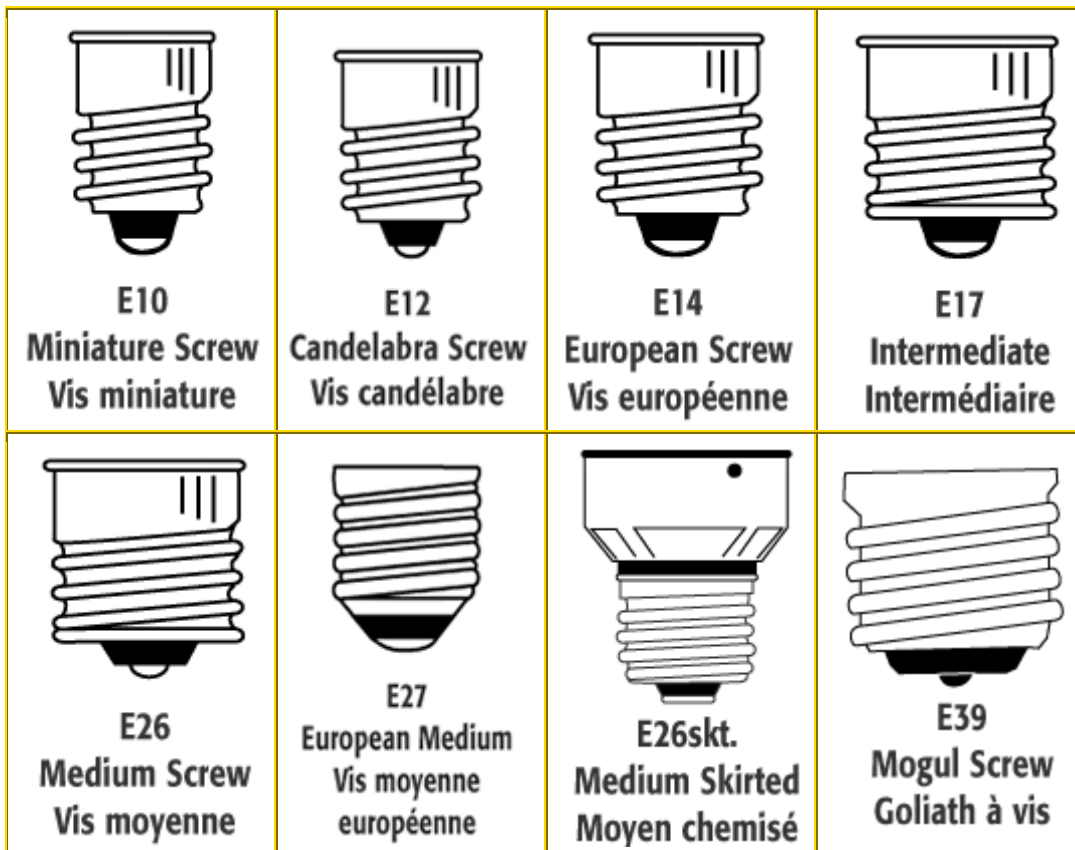


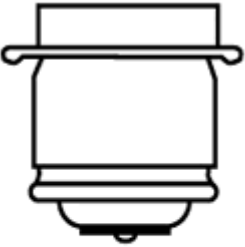


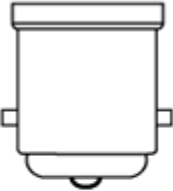
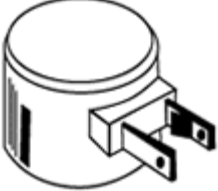





[Bases](#)

There are many different bases for incandescent lamps.

The bulb base connects the bulb to the electric current. The base is generally made of brass or aluminum. A brass base is more expensive but doesn't rust or freeze in sockets. This allows the bulb to unscrew easily at the end of its life.



 <p><b>P40S</b> Mogul Prefocus Goliath Préfocus</p>	 <p><b>DC / BA15d</b> Double Contact Bayonet Baïonette D.C.</p>	 <p><b>S14s</b></p>	 <p><b>B22</b> Bayonet Cap Capuchon baïonette</p>
 <p><b>Med. Side Prong</b> Moyen à fiche latérales</p>	 <p><b>GX 16d</b> Mogul End Prong Goliath à fiched d'extrémité</p>	 <p><b>GX 16d</b> Mogul Extended Prong Goliath à fiches prolongées</p>	 <p><b>Disc</b> Disque</p>
<p>Bases</p>			

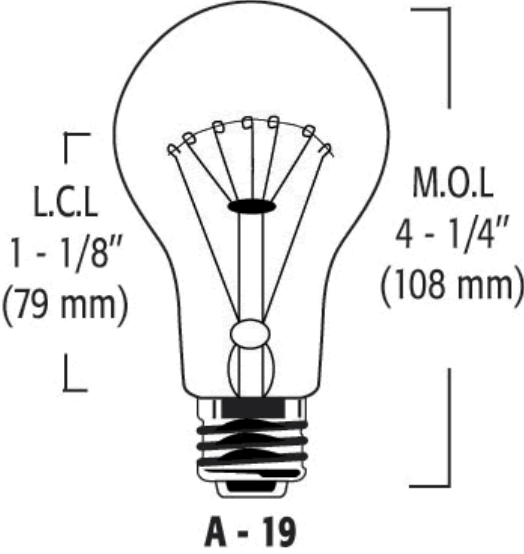
[Dimensions](#)

**M.O.L. (Maximum Overall Length)**

The maximum overall length shown in this catalog in inches and millimeters is the length including base and bulb.

**L.C.L. (Light Centre Length)**

The light centre length is the distance from the geometric center of the filament to a specified point on the base.





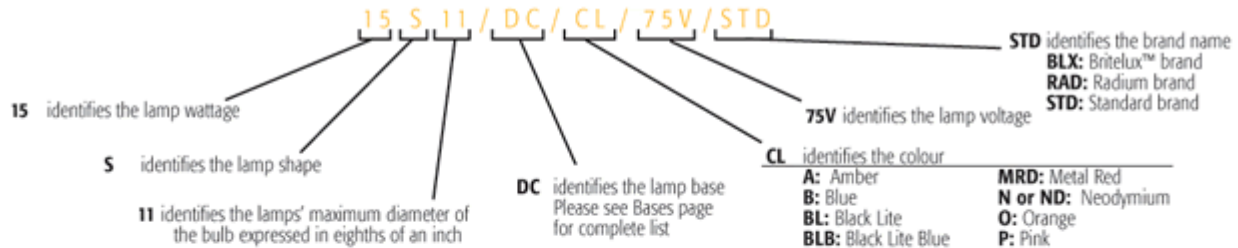
## Average Life

This value is the average life expectancy in hours based on the total operating time at which, under normal conditions, 50% of any large group of lamps is still burning. It is determined by testing a large number of the same lamps in controlled laboratory conditions.

# Product Description Guide

## How to read a lamp description

Description:



### Other characteristics include:

<b>1 card:</b> Blister Pack	<b>NF:</b> Narrow Flood
<b>2 card (2BP):</b> Blister Pack	<b>NSP:</b> Narrow Spot
<b>2P(K):</b> 2 pack	<b>PL:</b> Plant Lite
<b>24P(K):</b> 24 pack	<b>RS:</b> Rough Service
<b>ES:</b> Energy Saving	<b>RVS:</b> Rough and Vibration Service
<b>FL:</b> Flood	<b>SP:</b> Spot
<b>HM:</b> Half Mirror	<b>TS:</b> Traffic Signal
<b>HV:</b> High Voltage	<b>VFL:</b> Very Narrow Flood
<b>IF:</b> Interior Frost	<b>VNSP:</b> Very Narrow Spot
<b>IR:</b> Infrared	<b>WFL:</b> Wide Flood
<b>K:</b> Krypton	<b>VWFL:</b> Very Wide Flood
<b>MFL:</b> Medium Flood	

A lamps hour rating can be part of the description denoted, for example by 5M: 5000 hours, 20M: 20,000 hours.

<b>A:</b> Amber	<b>MRD:</b> Metal Red
<b>B:</b> Blue	<b>N or ND:</b> Neodymium
<b>BL:</b> Black Lite	<b>O:</b> Orange
<b>BLB:</b> Black Lite Blue	<b>P:</b> Pink
<b>BLK:</b> Black	<b>R:</b> Red
<b>C:</b> Ceramic	<b>SB:</b> Sky Blue
<b>CC:</b> Ceramic Clear	<b>SMK:</b> Smoke
<b>CB:</b> Ceramic Blue	<b>SP:</b> Snow Pink
<b>CG:</b> Ceramic Green	<b>STP:</b> Soft Tone Pink
<b>CL:</b> Clear	<b>SW:</b> Soft White
<b>CO:</b> Ceramic Orange	<b>T:</b> Transparent
<b>CP:</b> Ceramic Pink	<b>TA:</b> Transparent Amber
<b>CR:</b> Ceramic Red	<b>TB:</b> Transparent Blue
<b>CSP:</b> Ceramic Snow Pink	<b>TG:</b> Transparent Green
<b>CW:</b> Ceramic White	<b>TO:</b> Transparent Orange
<b>CY:</b> Ceramic yellow	<b>TP:</b> Transparent Pink
<b>DL:</b> Daylight Reading	<b>TR:</b> Transparent Red
<b>F:</b> Frost	<b>TY:</b> Transparent Yellow
<b>G:</b> Green	<b>WH:</b> White
<b>MGR:</b> Metal Green	<b>Y:</b> Yellow
<b>MLB:</b> Metal Blue	<b>YT:</b> Yellow tip