

LAMP REFERENCE GUIDE

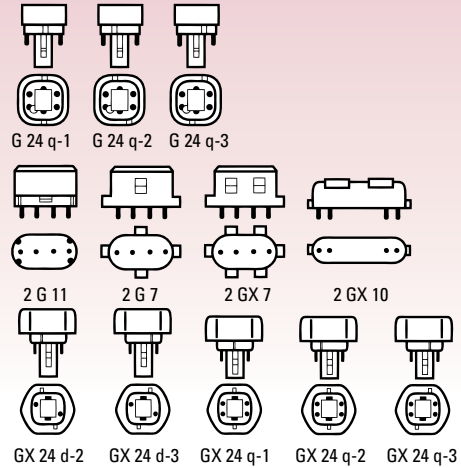
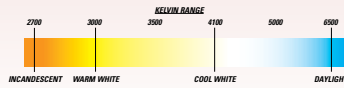
To help you select the Topaz lamps and lighting products you need, the following reference guide shows you a number of popular bulb shapes and bases from which you can choose.

Compact Fluorescent

Pages 19-30

Bases

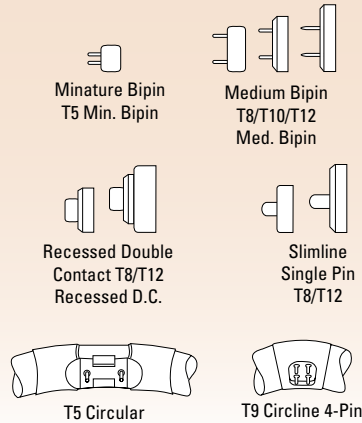
- Integral Starter for Magnetic Ballasts
- Electronic or Dimming Operation
- Temperature Scale



Linear Fluorescent

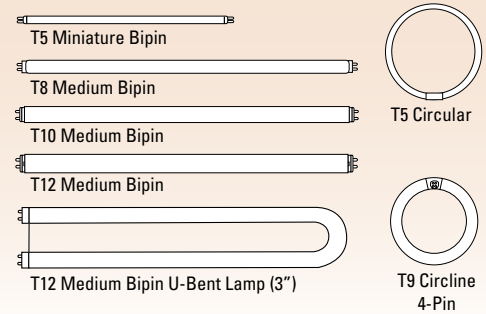
Pages 31-44

Bases



Bulb Shapes

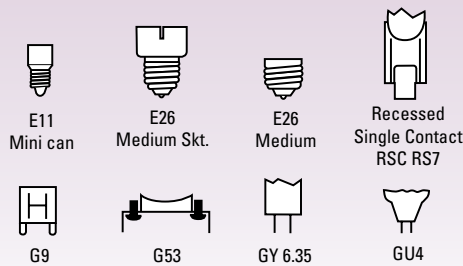
- Preheat/ Rapid Start
- High Output/ Very High Output
- Instant Start



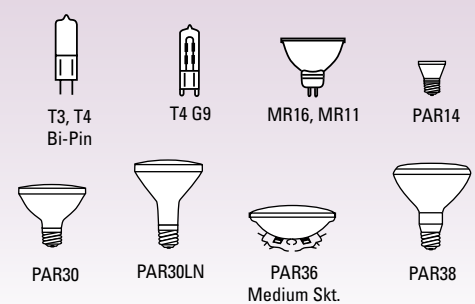
Halogen

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Bases



Bulb Shapes





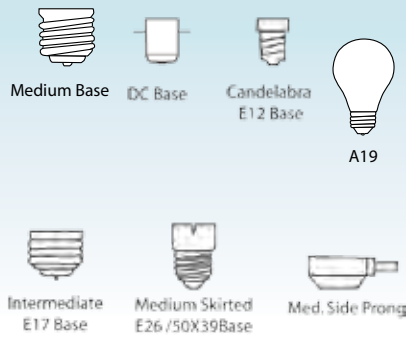
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Lamp Reference Guide

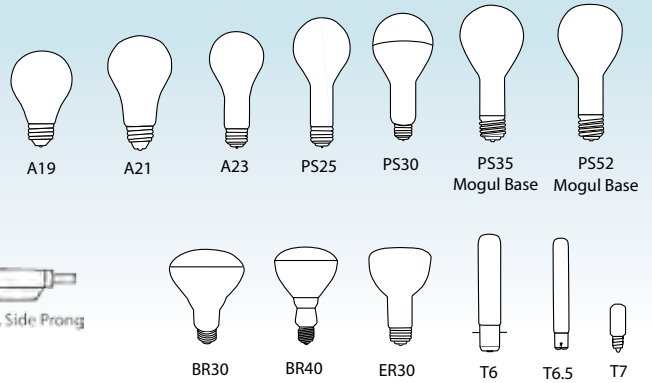
Incandescent

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Bases



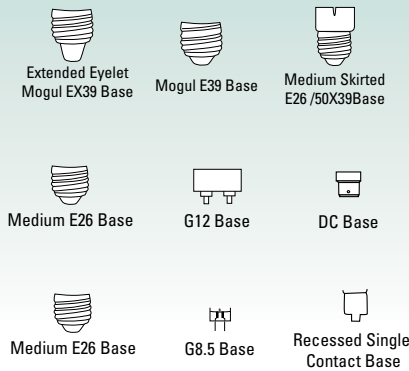
Bulb Shapes



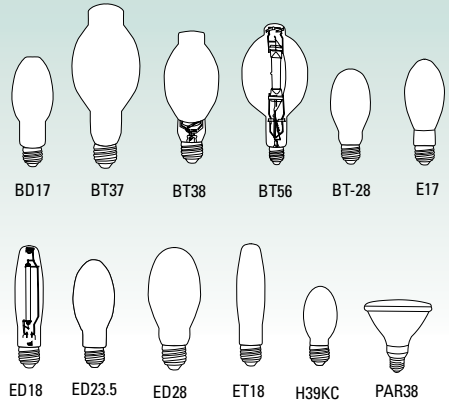
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Bases



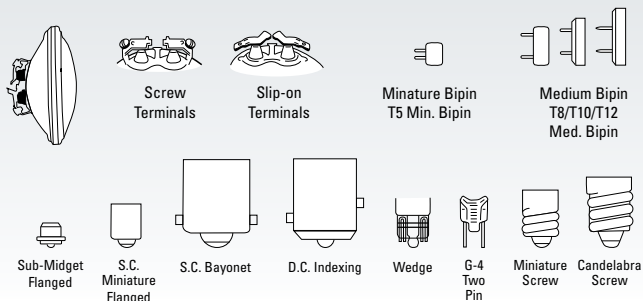
Bulb Shapes



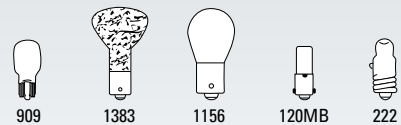
Other Lamp Types

Pages 93-96

Bases



Bulb Shapes



LAMP ENERGY AND COMPARISON GUIDE

Topaz is concerned with the cost of energy and the rate in which energy is being consumed. To help you serve your customers better, we have included the Lighting Comparison Chart below, which shows the energy consumption for different types of lighting. This chart will help you point out how your customers can save in operating costs and increase profit margins by using more efficient types of lighting based on their needs.

To help your customers, it is important to note that energy consumption for lamps is rated by efficacy. Efficacy is the ratio of light produced to energy consumed. It's measured as the number of lumens produced divided by the rate of electricity consumption (lumens per watt).

This chart shows the efficacy of different types of lighting, as well as other points of comparison.

Lighting Comparison Chart

LIGHTING TYPE	EFFICACY (LUMENS/WATT)	LIFETIME (HOURS)	COLOR RENDITION INDEX (CRI)	COLOR TEMPERATURE (K)	INDOORS/OUTDOORS
INCANDESCENT					
STANDARD "A" BULB	10-17	750-2500	98-100 (EXCELLENT)	2700-2800 (WARM)	INDOORS/OUTDOORS
TUNGSTEN HALOGEN REFLECTOR	12-22	2000-4000	98-100 (EXCELLENT)	2900-3200 (WARM TO NEUTRAL)	INDOORS/OUTDOORS
REFLECTOR	12-19	2000-3000	98-100 (EXCELLENT)	2800 (WARM)	INDOORS/OUTDOORS
FLUORESCENT					
STRAIGHT TUBE	30-110	7000-24,000	50-90 (FAIR TO GOOD)	2700-6500 (WARM TO COOL)	INDOORS/OUTDOORS
COMPACT FLUORESCENT LAMP (CFL)	50-70	10,000	65-88 (GOOD)	2700-6500 (WARM TO COOL)	INDOORS/OUTDOORS
CIRCLINE	40-50	12,000	52-80 (FAIR TO GOOD)	3000-6500 (WARM TO COOL)	INDOORS
HIGH-INTENSITY DISCHARGE					
MERCURY VAPOR	25-60	16,000-24,000	50 (POOR TO FAIR)	3200-7000 (WARM TO COOL)	OUTDOORS
METAL HALIDE	70-115	5000-20,000	70 (FAIR)	3700 (COOL)	INDOORS/OUTDOORS
HIGH-PRESSURE SODIUM	50-140	16,000-24,000	25 (POOR)	2100 (WARM)	OUTDOORS
LOW-PRESSURE SODIUM	60-150	12,000-18,000	-44 (VERY POOR)		OUTDOORS

BASED ON U.S. DEPARTMENT OF ENERGY INFORMATION

