

GLOSSARY OF LIGHTING TERMS

Average Rated Life

The statistical average of lamp life under controlled laboratory conditions. The actual life may vary depending on the environmental conditions, such as shock, vibration, temperature and voltage fluctuations.

Candle Power

A term used for the luminous intensity of a light source.

Colour Rendering

The colour rendering index (CRI) is a measurement of the correspondence between the colour of an object (it's "selfluminous colour") and its appearance under a reference light source. Essentially it is a comparison between the perception of colour by the human eye in natural daylight and any given artificial light source.

Colour Temperature

Measured in kelvins, it is the measure of the colour of light, not actual temperature. There are 3 main categories which are: warm 3300°K, intermediate or natural white 3300-5000°K & daylight > 5000°K.

Gas Filled

Gas filled lamps use an inert gas to protect the filament during operation. The use of a fill gas reduces the net rate of tungsten evaporation by several orders of magnitude. Since the net evaporation rate in gas is far less than in a vacuum, the filament can be operated at a higher temperature., thus making the lamps more efficient than vacuum lamps.

Halogen

Halogen lamps, in addition to being gas filled, have a gaseous halogen compound added to the gas fill. The halogen compound (usually bromine) must be accurately controlled. Its purpose is to prevent any blackening of the bulb by returning evaporated tungsten back to the filament through a 'halogen cycle'. The higher molecular weight gas and higher fill pressure permits operation of the filament at even higher temperatures than regular gas filled lamps, so that for the same life, halogen lamps have the highest efficiency.

Light

The term generally applied to the visible energy from a source. Light is usually measured in lumens or candle power.

Light Centre length

The distance from a reference point on the lamp base to the centre of the filament or light source.

Lumens

The amount of light emitted by a bulb. This can be converted to spherical candlepower by dividing by 12.57.

Vacuum

The incandescent tungsten filament must be protected from exposure to the atmosphere. This is achieved in a vacuum lamp by protecting the processing of the lamp so that a vacuum exists inside the glass envelope. Tungsten evaporation rates in vacuum lamps are generally much higher than in gas filled or halogen lamp types. As a consequence, normal bulb blackening causes an almost constant decrease in light output during the life of the lamp.

Voltage

Incandescent lamp 'voltage' designates the supply voltage to which the lamp should be connected to provide amperes; candle power and laboratory life characteristics.

Wattage

The power consumption (watts) or current rating (amps) at the design voltage.

8ths	Inches	mm
1		
2	1/4	
3		10
4	1/2	
5		20
6	3/4	
7		30
T-8	1	
9		40
B-10		
11		50
T-12		
13		60
14		70
MR-15	2	
16		80
A-17		
18		90
A-19		
PAR-20		100
21		110
22		120
23		130
	3	
25		140
26		150
27		160
28		170
29		180
PAR-30		190
31		200
	4	
33		210
34		220
35		230
PAR-36		240
37		250
PAR-38		
39		10
40		20
41		30
42		40
43		50
44		60
45		70
PAR-46		80
47		90
	6	
49		100
50		110
51		120
PG-52		130
53		140
54		150
55		160
PAR-56	7	
57		170
58		180
59		190
60		200
61		210
62		220
63		230
PAR-64	8	
65		240
66		250
67		
68		10
69		20
70		30
71		40
	9	
73		50
74		60
75		70
76		80
77		90
78		100
79		110
	10	