

Traditionally, Lamps (Light Bulbs) were designated by their wattage which implied the brightness and luminous efficiency of the lamp.

Today however, the more efficient LED Lamps can achieve the same brightness, measured in lumens, with much less power.

A typical data table for a new LED fitting will include the below example options:

NO.	LED LAMP SPECIFICATIONS:	
01	Luminaire lumens (with diffuser)	2950 lm
02	Lumens from chip (no diffuser)	3295 lm
03	Useful lumens	2850 lm
04	Rated Wattage	23W
05	Nominal life time of the lamp	50,000 hrs
06	Colour temperature	4000K
07	This product contains a Light Source of Energy Efficiency Class D	
08	Flicker free operation	

THE ENERGY TABLE EXAMPLES EXPLAINED:

- 01) Output lumen measurement based on entire fitting as it will be fitted (with diffuser) - this is the measurement that you will use to determine what is right for your light output levels. This is also the lumen data used when calculating lm/W (Lumen efficacy).
- 02) Output lumen measurement based on just the LED array output (without diffuser).
- 03) Useful lumens is a unit of measurement of the visible light output within a 120 degree beam angle.
- 04) Rated Wattage is the amount of power needed to achieve the stated lumens outputs.
- 05) Amount of hours on average the fitting will last for.
- 06) A low temperature (3000K) will have a warm orange glow and a high temperature (6000K) will have a clean blue glow - see our CCT guide for more info on this.
- 07) From 2022 Energy Efficiency has been re-scaled. What was an A rated LED fitting in 2021 could now be a 'D' or 'E' Class but this is only relevant to the actual LED not the fitting itself. Energy tables are calculated based on the output of the light source (LED/Array) divided by the power consumption and multiplied by a correction factor which depends on whether the light source is Mains or Non-Mains powered and whether the light source has a directional or non-directional beam angle (Directional =<90 degrees).
- 08) An LED driver converts the current from AC to DC and steps down the voltage so you get a constant current to your LED's - eliminating any visible flicker.

CFL / Fluorescent / Halogen Lamps → LED Lamps → LED Array



SAVE MONEY, REDUCE YOUR CARBON FOOTPRINT AND GET BETTER PERFORMING LIGHT FITTINGS

- ✓ **Reduce Lighting Bills by up to 80%:** LEDs use up to 90% less power than traditional incandescent light sources and offer the potential for a noticeable and significant reduction in energy costs and power consumption
- ✓ **Mercury Free:** unlike fluorescent lighting, LEDs are free from this RoHS restricted substance
- ✓ **Instant Light:** unlike fluorescent lighting there is no 'warm up' period – LEDs provide instant full brightness
- ✓ **Operating Temperature:** LEDs can perform well at low temperatures, increasing the areas within which these can be installed

LUMENS TO WATTAGE CONVERSION CHART

Lumen Brightness →	220+ Lumens	400+ Lumens	700+ Lumens	900+ Lumens	1300+ Lumens	1700+ Lumens	1900+ Lumens	2100+ Lumens	2500+ Lumens
Lamp Type ↓									
LED	3W	5W	8W	10W	15W	19W	21W	23W	28W
CFL	5W	7W	12W	13W	21W	26W	28W	32W	34W
Halogen	20W	35W	40W	50W	75W	90W	95W	100W	150W

USEFUL NOTE:

It is also advisable to look at the lamps "average lifetime" (no. 05 in the lamps specification table example).

An LED lamps average lifetime is usually much much longer which means you don't need to keep buying them regularly to replace them (unlike traditional fittings).