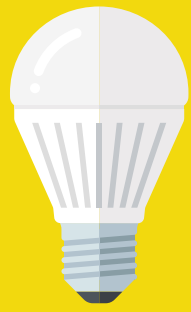


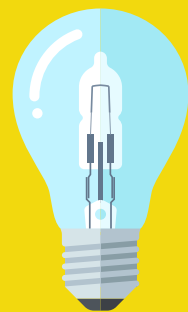
For residential applications LED and CFL lamps are best suited which will provide energy saving of approximately 80%



LED



CFL



Halogen



Incandescent

### Typical comparison of Incadescent lamps and CFL

Characteristics of lamp	Incadescent Lamp	Compact Fluorescent Lamps	LED
Lamp Wattage - Typical	60 W	11-13 W	9-12 W
Average Luminous Flux in Lumens	890	900	800
Lamp Life	750 - 1000 Hrs	6000 - 20000 Hrs	Upto 50000Hrs
Range Of Efficacy	8 -17 Lumens Per Watt	60 -72 Lumens Per Watt	90 -150 Lumens Per Watt

### Energy Saving and projected reduction of co2

Energy Saving and projected reduction in CO2 for typical energy saving lamps			
Type of lamp	Annual saving in kWhr for 8Hrs operation compared to Equivalent incandescent lamp of 60W for one lamp	% Savings compared to base case	Annual CO2 Reduction projected in kg.
CFL LAMP 13W	137	78.00%	74
HALOGEN 42W	52	30.00%	28
LED 9 W	149	85.00%	80



## A CONSUMER'S GUIDE TO

# ENERGY EFFICIENT LIGHTING



Reading the lamp label

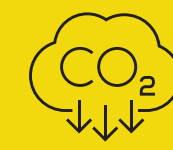


Myths and tips on lamps and luminaires

Save energy and money by choosing an energy-efficient lighting product!



With all the energy-efficient lamps currently on the market, you have many options for brightening your home. This guide will help you make the right purchase for your lighting needs.



Energy Saving and projected reduction of co2

# Shopping for the right light

So you decided it's time to buy a new light for your home. Arriving at the store, you may be surprised that the age-old incandescent light bulb is no longer on the shelf. Due to their high energy consumption, they have been phased out from Qatar. In its place you have an array of options: the rather inefficient halogen lamp, the much more efficient compact fluorescent lamp (CFL) and the long-lasting efficient LED.

Do not have concerns if the price of efficient lamp is slightly A++ higher. Choosing an energy-efficient lamp will reduce your energy bill every month. In fact, with the energy you save, A+ it might take no longer than a year and half to cover the A initial price of the lamp – not to mention the additional years of service during which you simply cash in. The lamp life of LED is higher which helps in less frequent replacement

## Types of lamps



Buying a light bulb today involves a lot more than just looking at watts:



### Colour temperature:

Do you prefer daylight colour or a yellowish light? For the latter, choose 2700K, or "warm white", lamps. For your office, choose a "cold white" lamp in excess of 4000K.

### Brightness/Light output:

Lumens measure the amount of light a lamp produces. The more lumens, the brighter the light. The first question to ask is whether the light will only be used for reading or does it need to be bright enough to light up an entire room?



### Lifetime:

The lifetime of a lamp is the number of hours it will operate before "burning out". Lamps that are constantly on will fail sooner, and those that are rarely used will last longer. The longer the lamp's life, the less often you will have to buy a new one.

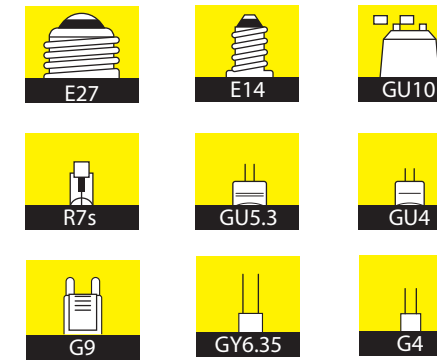
Also, always pay attention to the socket type!

E27 and E14 are most common sockets for use in Qatar.

### What lamps are best for

- General lighting: LED, CFL
- Outdoors: LED spots
- Spotlighting: LED spots
- Dimmable luminaires: LED, Halogen
- Crystal chandelier: LED, Halogen

### Most common sockets

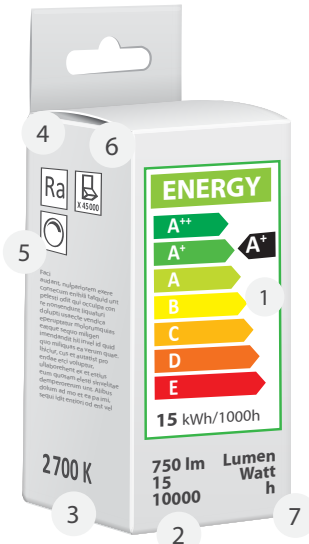


## Reading the lamp label

If the country of origin of your lamp is European Union, your lamp will come with an energy label showing its energy efficiency on a scale from A++ (most efficient) to E (least efficient).

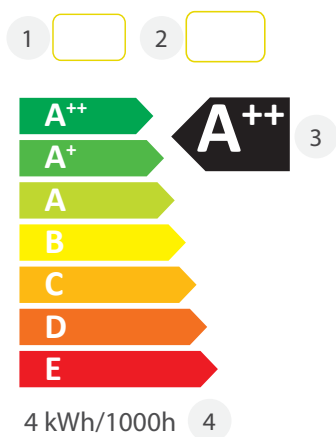
- The company that made or placed the lamp on the market
- The lamp model
- How energy efficient the lamp is
- Energy consumption during 1000 hours (typical energy consumption in a year)

### A lamp's package comes with lots of useful information



Some packages also mention the incandescent power equivalence (W). This simply compares the quantity of the lamp's light to that of an old incandescent lamp.

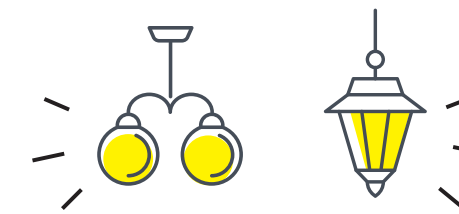
- The energy label (see below)
- Average lifetime of the lamp (1000 hours equals an average of one year of usage)
- Colour of the light, from yellowish (2700K) to daylight (6500K)
- How accurate the lamp is at revealing different colours (a colour rendering index of 80 is good, 100 is the best)
- Whether it is dimmable or not (if not, a cross appears over the symbol)
- How many times the light can be switched on and off before it burns out
- The more lumens, the brighter the light



## Luminaires

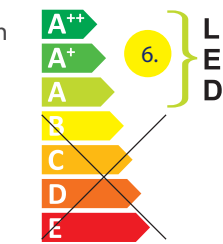
A luminaire is a complete electric light fixture, including the lamp(s), mechanism for inserting or holding the lamp(s), wiring, socket and other protective components.

There are all sorts of luminaire types for residential lighting: floor, table, wall, pendant, chandelier, spotlight, ceiling, direct, indirect, clear, frosted, opaque... No matter what you choose, always consider the information on the label:



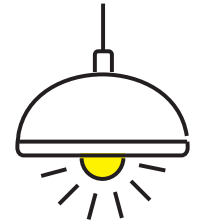
### Reading the luminaire label

- The company that made or placed the luminaire on the market
- The luminaire's model
- This figure can represent the luminaire type, or the furniture where it is built-in
- Indicates with which lamps the luminaire is compatible with and/or if it contains LEDs
- Indicates if it contains a lamp. In the case of built-in LEDs, it says whether they are replaceable or not
- Graphical identification of the efficiency class of the compatible lamps



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## Myths and tips on lamps and luminaires



- Although the amount of mercury in fluorescent lamps is actually very small (it could fit in the tip of a pen) you should always be careful if a CFL breaks. LEDs, on the other hand, are more efficient and do not contain mercury.
- It is not true that LEDs provide low light, or that they cannot light a whole room. They can either have a more directional light, which focuses the light on a smaller area or object, or a wider distribution of light. Besides, the small associated power (Watt) only means that LED technology provides a lot of light with less energy consumption.
- Before buying dimmable LEDs and fluorescent lamps, make sure your dimmer is compatible.
- The most efficient lamp is the one turned OFF when not in use! Remember, always switch of the lights when leaving a room.
- Buy energy efficient lamps for the areas of your home that use the most lighting – such as the living room. Because of their inefficiency, halogen lamps are usually not the cheapest option in the long run.
- Always buy luminaires that can use high energy efficiency class lamps (A++ and A+).
- For fluorescent light luminaires, use T5 fluorescent tubes as they are far more efficient than T8 or T12.
- Be sure to clean the luminaire from time to time – you'll be surprised how just a little bit of dirt can greatly decrease the amount of light a lamp produces.