European Commission

A Consumer's Guide to Energy-Efficient Lighting

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.

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 gone extinct. 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.

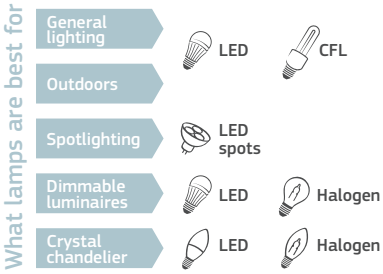
Don't be scared off by a higher price tag. Choosing an energy-efficient lamp will reduce your energy bill every month. In fact, with the energy you save, it might take no longer than a year and half to cover the initial price of the lamp – not to mention the additional years of service during which you simply cash in. Substituting a halogen lamp with a LED will save you over 100€!

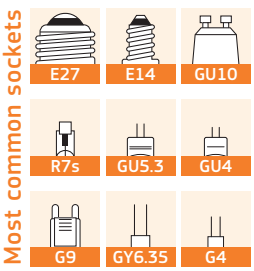
Types of lamps

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

- **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?
- **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.
- **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.

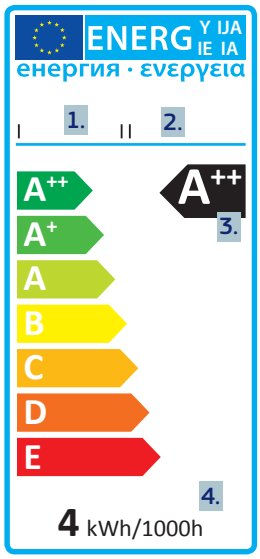
Also, always pay attention to the socket type!
For more tips, check out the PremiumLight Project website.





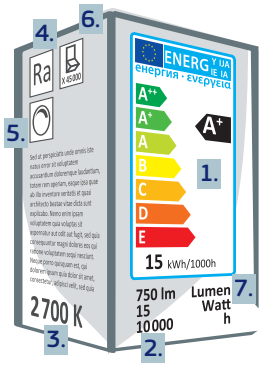
Reading the lamp label

Your lamp will come with an energy label showing its energy efficiency on a scale from A++ (most efficient) to E (least efficient).



1. The company that made or placed the lamp on the market
2. The lamp model
3. How energy efficient the lamp is
4. Energy consumption during 1 000 hours (typical energy consumption in a year)

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



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

Some packages also mention the incandescent power equivalence (60 W). This simply compares the quantity of the lamp's light to that of an old incandescent lamp.

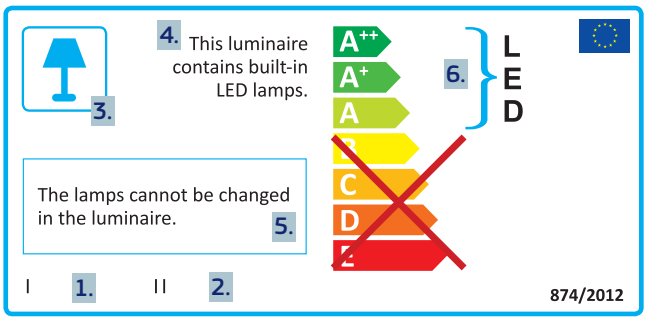
Luminaires

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



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

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 off 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.

More information

European Commission

- Regulation No 244/2009 of 18 March 2009 ecodesign requirements for non-directional household lamps
- Regulation No 245/2009 of 18 March 2009 ecodesign requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballasts and luminaires able to operate such lamps
- Regulation No 347/2010 of 21 April 2010 amending Regulation No 245/2009
- Regulation No 1194/2012 of 12 December 2012 ecodesign requirements for directional lamps, light emitting diode lamps and related equipment
- Regulation No 874/2012 of 12 July 2012 energy labelling of electrical lamps and luminaires
- Energy Efficiency of Products
- Ecodesign and Energy Labelling
- Ecolabel

Product selectors and calculators

- PremiumLight project

Should you have a question, please visit Europe Direct Contact Centre

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