

Choosing  
energy saving  
light bulbs

for your  
home

2014



**rica**



# Choosing energy saving light bulbs for your home

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## Introduction

Energy saving light bulbs are good for the environment and cheaper to run and they last longer too.

Old-fashioned light bulbs were withdrawn from sale in September 2012, so you now have to buy energy saving light bulbs.

There were problems with energy saving bulbs when they first came out, but they have improved a lot since then and as the technology has advanced the range of bulbs has grown.

### TIPS

#### **Get a new bulb**

If you've got a problem with an existing energy saving bulb, just replace it. It may be wearing out, or it may be an early model. You will almost certainly be able to find a bulb that is more suited to your needs.

#### **Get a brighter bulb**

A bright energy saving bulb only costs about £1.50 more per year to run than a less bright one, so if you want the extra light get the brighter bulb.

#### **Eye tests**

Many people find it harder to see as they get older. Some of the causes of this can be treated. If you are finding it harder, think about an eye test – it may not be your lighting that needs a change!

# Light bulb types

This guide tells you what you need to know about the different types of bulb that are available and how to choose the right one. We also have the results of some tests carried out by Which?. Full test results are available to subscribers at [which.co.uk](http://which.co.uk), where you can also find free advice on energy saving.

## Lighting

It's important to get the lighting in your home right, especially if you can't see well. RNIB and Thomas Pocklington Trust (see back cover) have a useful booklet called *Make the most of your sight – Improve the lighting in your home*.

There are three main types of energy saving light bulb:

### Compact fluorescent lamps (CFLs)

These are the most common energy saving light bulbs.

### Halogen bulbs

These are the cheapest energy saving light bulbs. They are also the least energy efficient and the least durable.

### Light emitting diode (LED) lights

These are the most expensive energy saving light bulbs. They are also the most energy efficient and the most durable. A £25 LED light should pay for itself within 5 years.

## Type of bulb and energy savings to be made\*

	CFL	Halogen	LED
			
Price	£2-10	£2-3	£10-35
Energy saving*	up to 80%	up to 30%	up to 90%
Durability – years	10	2	20

\*as compared to an old-fashioned bulb

# Light bulb issues

Things you need to know about when choosing energy saving light bulbs

## Light and brightness

Most people are used to choosing a bulb by its wattage but the wattage is really a measure of the power consumption of the bulb, so it is not a good measure of light brightness.

If you want to know how much light a bulb gives out, the measure to use is lumens (lm). The table on page 5 shows how many lumens you need for different uses. *Make the most of your sight* (see page 3) advises using a ceiling light for background lighting and 'task lights' for seeing things close up.

## Colour

Different bulbs give different colour light. Old-fashioned bulbs give a quite yellow light and most people are used

to this. When the first CFL bulbs came out, they gave a more blue/white light which many people found unpleasant. It is possible that you have some of these bulbs at home, or that you got some when they came out and have gone back to traditional bulbs.

New CFL bulbs have been designed to give light in the same colour as old-fashioned bulbs, so they should be much more acceptable.

Halogen bulbs give very similar light to old-fashioned bulbs. LED bulbs can give light in just about any colour. Check the packaging and look for the colour light you prefer.

Some people need light in very specific colours to see clearly. You may need to take some advice from a sight loss specialist, such as an optometrist, ophthalmologist or orthoptist.

## Start-up time

Halogen and LED bulbs, like old-fashioned bulbs, light up immediately as soon as you switch them on. CFL bulbs may take some time to come on, and to get up to full brightness, though they have improved since the first CFL bulbs came out. There is a wide range in performance with the fastest bulbs reaching full brightness in around 30 seconds and others taking over 5 minutes.

In bathrooms, halls and stairways it is important for the light to come on quickly. Get a 'quick start' CFL bulb for these areas (they come on in less than 30 seconds). They are likely to cost an extra pound or two, but they may keep you safe.



### Lumens are here to stay

Many manufacturers give a 'watts equivalent' figure on their packaging to indicate the brightness level. However, all packaging should now give brightness in lumens.

## Choosing the right bulb for the right place

location/use	large rooms (use with reading lamp)	staircase and landings	average-sized rooms (use with reading lamp)	large rooms with more than one fitting	lamps or fittings with more than one bulb	specialist fittings (under kitchen cabinets etc)
<b>Lumens</b> (approx.)	at least 1,200	at least 1,200	600-700	600-700	300-400	up to 250
<b>watts</b> (approx.)						
old-fashioned	100	100	60	60	30	25
halogen	80	80	50	50	40	20
CFL	20	20	10	10	7	4
LED	10	10	6	6	4	2



*Large rooms*



*Average-sized rooms*



*Specialist fittings*



*Stairways*



*Large rooms with more than one fitting*



*Fittings with more than one bulb*

# Light bulb issues

## Dimmers

Halogen bulbs can be used with dimmer switches, but most LEDs and CFL bulbs cannot. You can now get dimmable CFL and LED bulbs, which you should be able to identify by the packaging.

If you want really good dimming performance, it may be better to stick to halogen bulbs.

## Timers

Both halogen and LED bulbs can be used with timers and light or movement sensitive (photocell) lights. CFL bulbs cannot currently be used with timers or photocell circuits.

## Disposal/recycling

All bulbs should be recycled rather than disposed of in the general waste.

CFL bulbs in particular need to be treated carefully as they contain mercury, which could be dangerous. If your council provides collection points for CFL bulbs, you should use these. Alternatively your electrical shop should accept a used bulb from you. Most will do this quite happily as long as you are buying a replacement bulb from them. It's a good idea to take the old bulb along to the shop anyway, so that they can help you find something similar (or different!).

## Shapes and sizes

There's no difference between the different shaped bulbs, so you can get whichever one you prefer.

For some light fittings you will need to be careful to get a bulb that fits, and for some you may want a specific shape (a candle say). You can get energy saving light bulbs in most shapes – even spotlight bulbs.



*Stick-shaped bulbs do not give much light from the end, which may make it quite dark directly under a ceiling light. Spiral bulbs are better. Enclosed bulbs (top row) have the best light distribution, but are less bright for a given wattage.*

## Glare

All bulbs will cause glare if you can see the bulb directly. If this is a problem for you, make sure you have a good shade (*Make the most of your sight* (see page 3) has information on this). If a long, stick shaped CFL bulb pokes out of the top or bottom of a shade – get a shorter bulb or a taller shade.

## Fittings

Old-fashioned bulbs had either a bayonet or a screw cap (there are three sizes of each), and energy saving bulbs that are designed to replace them have the same range of fittings. UK ceiling lights generally have bayonet fittings, but some lamps and lamp holders have screw fittings.

CFL, halogen and LED bulbs are available in a two pin fitting for use in specialist lamp holders.



*Above: Two pin fitting (GU10)*



*Above, from left:  
Standard sized bayonet fitting (BC/B22);  
Small bayonet fitting (BS/B15);  
Standard screw fitting (ES/E27);  
Small screw fitting (SES/E14)*

## Frequently asked questions

### Don't energy saving light bulbs flicker?

No they don't. Some of the old ones might do if they are broken. If you have got a bulb that flickers, replace it.

### Does it use more electricity to turn the light off and on again than to leave it on?

CFL bulbs need a short burst of extra energy when they come on, no more than a few seconds of normal operation. It can shorten the life of the bulb if you turn it on and off a lot, however. Turn the light off if you're leaving the room for 15 minutes or more. Do leave energy saving bulbs on in places where you need the light to keep you safe (on the stairs etc), so you don't have to wait for them to warm up.

### Can I use a 75 watts equivalent CFL bulb in a lamp shade that can only take bulbs up to 40 watts?

Yes you can. It is the actual wattage that matters here (and most CFL bulbs use much less than 40 watts).

### Can I use energy-saving light bulbs in cold areas?

CFLs take longer to start up when they are cold. If you need light quickly in colder areas – outside or in a garage or pantry, for example – a halogen or LED bulb is better.

Most shops carry a wide range of bulbs from different manufacturers, which can be daunting, but if you know what you want you should be able to find it.

- ✿ Think about what type you want, the fitting and how bright you want it (best to think in lumens).
- ✿ Then think about anything else you might need like a specific shape, colour of light, quick start or dimmability.

It is a good idea to go to a specialist electrical shop to buy a bulb. They are more likely to have what you are looking for, and you will be able to ask for advice and check if the packaging isn't clear. They may be the same price as other retailers and will have help on hand.

You can, of course, buy bulbs online. Check all the features meet your needs before making your order.

## Price

Halogen bulbs cost around £2 or £3. CFL bulbs cost from about £2 up to almost £30 for very specialist bulbs – most are less than £10. LED bulbs cost between about £10 and £35. Of course this isn't cheap, but they do last longer than old-fashioned bulbs and use much less electricity. If you buy a CFL bulb for £6, it should pay for itself in a year.

Features like dimmability and quick start usually cost a few extra pounds. But don't forget you may be using the bulb for around 10 years, so if you want the extra features it's worth paying for them.

## Quick reference table

Bulb type

**CFL**

**Halogen**

**LED**



Price (guide)

£2-10

£2-3

£10-35

Energy saving<sup>1</sup>

up to 80%

up to 30%

up to 90%

Durability

10 years

2 years

20 years or more

Dimmable

some

yes

some

Instant start

no

yes

yes

Timers, photocells

no

yes

no

Cold areas

no

yes

yes

Saving over 10 years<sup>2</sup>

£69

£7

£72

<sup>1</sup> as compared to old-fashioned bulb

<sup>2</sup> estimate, as compared to old-fashioned bulb, includes cost of replacement bulbs



*In cold places use a halogen or LED bulb*



*Kitchen unit lights can be CFL, halogen or LED*



*Lights in cupboards are usually less than 250 lumens*

# Buying bulbs Best on test

**Which?**

Which? has tested energy saving bulbs for performance and durability.

Here we show some of the best bulbs in their tests and some others that performed well. Full test results, including the best buys for different energy saving light bulb types, are available to subscribers at [which.co.uk](http://which.co.uk), where you can also find free advice on energy saving.

## Low brightness (<600 lm)

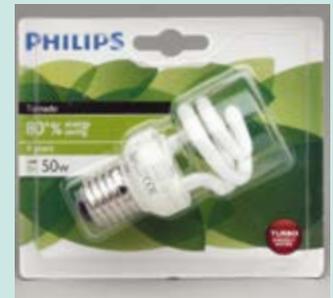
### Best buy

Megaman 7W  
Clear candle



### Worth a look

Philips Tornado  
8W spiral



## Medium brightness (600–800 lm)

### Best buy

Philips 11W  
A shape LED



### Quick start CFL

Philips 12W  
Tornado



## High brightness (>800 lm)

### Best buy

Verbatim 10W Classic  
A shape bulb



### Worth a look

Ikea Sparsam 20w  
stick





*In the lab: the Which? testing programme identifies the best performing bulbs*

## FIVE TIPS FOR BUYING LIGHT BULBS

- ✿ Work out what you need before you shop and write it down if necessary.
- ✿ Go to a specialist electrical shop as supermarkets may not have as wide a range.
- ✿ If you're replacing a bulb, take the old one with you.
- ✿ Bulbs should last a long time, so it's worth spending a little more to get the one you need.
- ✿ Don't shop by brand; it's not the best indicator of what you need.



Independent research and information on products and services for older and disabled people.  
[www.rica.org.uk](http://www.rica.org.uk)

## Thomas Pocklington Trust



Thomas Pocklington Trust has carried out extensive research highlighting the importance of good lighting for people with sight loss. You can find this on their website:  
[www.pocklington-trust.org.uk](http://www.pocklington-trust.org.uk)



RNIB is a national organisation providing information and services for people with sight problems.  
**Helpline: 0303 123 9999**  
[www.rnib.org.uk](http://www.rnib.org.uk)



The Macular Society is the only national charity dedicated to supporting everyone affected by macular disease.  
**Helpline: 0300 30 30 111**  
[www.macularsociety.org](http://www.macularsociety.org)



## Consumer research for older and disabled people

Unit G03 The Wenlock  
50-52 Wharf Road  
London N1 7EU  
Tel: 020 7427 2460  
Textphone: 020 7427 2469  
Email: [mail@rica.org.uk](mailto:mail@rica.org.uk)  
[www.rica.org.uk](http://www.rica.org.uk)



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[facebook.com/RicaUK](https://facebook.com/RicaUK)



## Thomas Pocklington Trust



Housing and support for  
people with sight loss

Pier House  
90 Strand on the Green  
London W4 3NN  
Tel: 020 8995 0880  
Email: [info@pocklington-trust.org.uk](mailto:info@pocklington-trust.org.uk)  
[www.pocklington-trust.org.uk](http://www.pocklington-trust.org.uk)

In partnership with Which?



The information contained in this guide is correct at the time of going to print (April 2014). It will be reviewed every two years.

This leaflet is also available in audio or braille formats. To order a copy, please call 020 8995 0880 or email [research@pocklington-trust.org.uk](mailto:research@pocklington-trust.org.uk).

Research and writing:  
Jasper Holmes, Rica

Design: Sarah Watson

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Which? and Thomas  
Pocklington Trust

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