Lighting the future
Your guide to changing to energy efficient lamps
Out with ordinary light bulbs
In with energy efficient lamps

Classic incandescent light bulbs have been gradually phased out since September 2009 under EU regulations. Those with wattages higher than 60W are no longer available, with 60W bulbs disappearing as of September 2011. By simply switching to eco-friendly bulbs in the home and workplace, people everywhere can lower carbon emissions and energy consumption. GE offers a wide range of alternatives to help you light up a greener world with halogen, compact fluorescent and rapidly evolving LED lamps – all of which fit into ordinary existing sockets.

This guide will help you decide on the clear or non-clear bulb you need with the features and benefits you’d like. Instead of being measured in watts, all energy efficient lamps are measured in lumens: a clear explanation is included on page 7.

Directional lamps (spot) and specialty types are not included in the phase out.

Phase out lamps

- Incandescent GLS Frosted > 15W
- Incandescent GLS Clear > / = 60W

Replacement lamps

<table>
<thead>
<tr>
<th>Type</th>
<th>Finish</th>
<th>Wattages</th>
<th>Cap</th>
<th>Life</th>
<th>Energy Efficiency Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED Replacement</td>
<td>Frosted</td>
<td>9, 13W*</td>
<td>E27, B22</td>
<td>25,000 hours</td>
<td>A (* Available from Spring 2012)</td>
</tr>
<tr>
<td>LED GLS</td>
<td>Frosted</td>
<td>5, 8.8W</td>
<td>E27, B22</td>
<td>25,000 hours</td>
<td>A</td>
</tr>
<tr>
<td>Compact Fluorescent Stick Replacement</td>
<td>Frosted</td>
<td>8, 9, 11, 12, 15, 20W</td>
<td>E27, B22, E14</td>
<td>10,000 and 6,000 hours</td>
<td>A</td>
</tr>
<tr>
<td>Spiral T2, Spiral T3</td>
<td>Frosted</td>
<td>8, 12, 15, 20, 23, 32W</td>
<td>E27, B22, E14</td>
<td>15,000, 8,000 and 6,000 hours</td>
<td>A</td>
</tr>
<tr>
<td>Compact Fluorescent Stick Replacement</td>
<td>Frosted</td>
<td>9, 11, 15, 23W</td>
<td>E14, E27, B22</td>
<td>10,000 and 6,000 hours</td>
<td>A</td>
</tr>
<tr>
<td>Compact Fluorescent Stick Replacement</td>
<td>Clear</td>
<td>28 – 100W</td>
<td>E27, B22</td>
<td>2,000 hours</td>
<td>C, D</td>
</tr>
<tr>
<td>HaloGLS</td>
<td>Clear</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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* Available from Spring 2012
### Phase out lamps

- Incandescent Candle Frosted > 15W
- Incandescent Candle Clear > / = 60W

### Replacement lamps

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<tr>
<th>Light Type</th>
<th>Finish</th>
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<th>Cap</th>
<th>Life</th>
<th>Energy Efficiency Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LED Décor Candle</strong></td>
<td>Clear, Frosted</td>
<td>2, 4.5W*</td>
<td>E14, E27, B22</td>
<td>17,000 hours</td>
<td>A</td>
</tr>
<tr>
<td><strong>Candle T2</strong></td>
<td>Frosted</td>
<td>7, 9, 11W</td>
<td>E27, B22, E14</td>
<td>10,000 and 6,000 hours</td>
<td>A</td>
</tr>
<tr>
<td><strong>Halo Candle</strong></td>
<td>Clear</td>
<td>18 – 42W</td>
<td>E14, E27, B15, B22</td>
<td>2,000 hours</td>
<td>C, D</td>
</tr>
<tr>
<td><strong>LED Décor Spherical</strong></td>
<td>Clear, Frosted</td>
<td>2, 4.5W*</td>
<td>E14, E27, B22</td>
<td>17,000 hours</td>
<td>A</td>
</tr>
<tr>
<td><strong>Spherical T2, GLS T2</strong></td>
<td>Frosted</td>
<td>5, 7, 8, 12W</td>
<td>E27, B22, E14</td>
<td>10,000 and 6,000 hours</td>
<td>A</td>
</tr>
<tr>
<td><strong>Halo Spherical</strong></td>
<td>Clear</td>
<td>18 – 42W</td>
<td>E14, E27, B15, B22</td>
<td>2,000 hours</td>
<td>C, D</td>
</tr>
<tr>
<td><strong>LED Décor Globe</strong></td>
<td>Frosted</td>
<td>2, 4.5W*</td>
<td>E27, B22</td>
<td>17,000 hours</td>
<td>A</td>
</tr>
<tr>
<td><strong>Globe T3</strong></td>
<td>Frosted</td>
<td>15, 20, 23W</td>
<td>E27, B22</td>
<td>6,000 hours</td>
<td>A</td>
</tr>
</tbody>
</table>

*Available from Winter 2011

All product information, marketing literature can be downloaded from the GE Lighting website at [www.gelighting.com/eu](http://www.gelighting.com/eu)

Retrofit lamps
No need to change light fittings - just the bulbs

GE has a wide range of alternatives to traditional, inefficient incandescent light bulbs, of which LED technology is the most forward thinking. Many companies make claims about LED performance but all GE claims are supported by stringent, comprehensive testing and backed by over 100 years of expertise in the lighting business.

LED lamps
Innovative technology

GE LEDs are very economical and environmentally friendly: they are mercury free, use far less energy than halogen or incandescent lights, and last longer. They fit into everyday light fittings and the light comes on the instant you click the switch.

Our LEDs can be used everywhere, from general to mood lighting and spotlighting. Although LEDs are directional light sources, our LED Energy Smart™ lamp provides a multi-directional light output, just like a traditional light bulb, with an 80% energy saving.

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumes just 9W (470 lumens) compared to an equivalent traditional 40W bulb</td>
<td>Looks just like a traditional bulb</td>
</tr>
<tr>
<td>Multi-directional light output</td>
<td>Up to 25,000 hours life</td>
</tr>
<tr>
<td>Cool to touch</td>
<td>Lasts 25 times longer than a traditional 40W bulb</td>
</tr>
<tr>
<td>Robust – no fragile filament</td>
<td>Full light comes on instantly</td>
</tr>
<tr>
<td>Environmentally safe: no mercury</td>
<td></td>
</tr>
</tbody>
</table>

Décor LEDs
Creating mood and saving energy

GE’s Décor LED range are perfect for when you need a more decorative-looking bulb, for instance in a chandelier. Available as spherical and candle lamps, they also come in clear and frosted finishes. They deliver incandescent-like sparkling and diffuse effects for mood lighting.

<table>
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<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available in 2W and 2.5W, up to 80 lumens. A 249 lumen version will be available at the end of 2011</td>
<td>Very low energy consumption</td>
</tr>
<tr>
<td>Same size as traditional or halogen equivalents</td>
<td>Up to 17,000 hours life</td>
</tr>
<tr>
<td>Robust and shock resistant</td>
<td>Last up to 17 times longer than similar decorative halogen or traditional lamps</td>
</tr>
<tr>
<td>Full light comes on instantly</td>
<td>Environmentally safe: no mercury</td>
</tr>
</tbody>
</table>
eCFL lamps
Energy saving performance

Save money on bills yet lose nothing in quality with GE’s new electronic compact fluorescent (eCFL) lamps. Ideal for ambient light, eCFLs combine energy saving benefits with high quality lighting.

Our brand new LongLast™ Spiral lamp is the smallest and brightest lamp in the premium segment on the market. As well as fast warm-up, it provides outstanding energy savings for 15 years.

Features:
- Lamps fit almost everywhere
- Guaranteed outstanding light quality for life
- Available in various colour temperatures

Benefits:
- 80% more energy-efficient than traditional incandescent from our ‘A’ energy labelled products
- Long lasting – between 6,000 and 15,000 hours (15 years)
- Quick and flicker-free start with fast warm-up
- Environmentally friendly with minimised mercury content

Halogen lamps
Environmentally-friendly, crisp light

GE’s Energy Efficient Halogen (EEH) lamps look just the same as traditional bulbs, with the same bright quality light, but cut down on energy consumption by up to 30%.

Available in standard candle, spherical and reflector shapes, our lamps create a stunning light, and can also be used with dimming switches for a cosier atmosphere.

Unlike some compact fluorescent products, all GE Halogen lamps work with existing light fittings.

Features:
- Consistent quality of light throughout bulb life
- Can be used with dimming switches

Benefits:
- Full light comes on instantly
- Last twice as long and consume 30% less electricity than corresponding traditional light bulbs
- Environmentally friendly: no lead or mercury
Your guide to GE packaging

GE packaging is designed to be clear and simple as well as comply with regulations and guidelines. Retailers can display GE products in an organised way for consumers to easily identify what they need.

We use a graphic symbol and colour coding for each lamp type (LED, eCFL, Halogen) and its suitable application (general, decorative or spotlight). To make comparison easy, the traditional wattage is still included.

GE packaging colour codes

<table>
<thead>
<tr>
<th>Lamp Type</th>
<th>Lamp Symbol</th>
<th>General Lighting</th>
<th>Decorative Lighting</th>
<th>Spotlights</th>
<th>Specialty Lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED</td>
<td></td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
</tr>
<tr>
<td>eCFL</td>
<td></td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
</tr>
<tr>
<td>Halogen</td>
<td></td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
<td>Watts Cap Lumen</td>
</tr>
</tbody>
</table>

Identifying what you need

- **Product symbol**
- **Product information box**
- **Energy rating illustration**
- **Wattage comparison**
- **Lumen value**
- **Dimmable**
- **Lamp life in hours**
- **Application category colour code panel**
Switching from Watts to Lumens
How to choose your light bulb strength

Traditional light bulbs are being phased out and modern light technologies use different amounts of power to achieve the same amount of light. Instead of referring to watts anymore, we now need to measure and compare light in terms of lumens.

What are lumens?

A lumen (lm) is a measure of the total ‘amount’ of visible light emitted by a source; the higher the number, the brighter the light. Choosing the right kind of light bulb depends on the strength and type of light you want.

These charts to the right show how the wattage of traditional incandescent light bulbs compares to the wattage and lumens of energy-efficient ones. For instance, a traditional 60W bulb with 700 lumens equals a 42W Halogen bulb emitting 630 lumens. This is equivalent to a 12W eCFL bulb emitting 715 lumens or a 13W LED bulb emitting 806 lumens.

The way forward

GE offers the very best options on the market, in a wide variety of fittings, shapes and sizes. Many have the option of warm light and are even dimmable. Most also switch on instantly.

Energy efficient light bulbs use less electricity than standard bulbs to do the same job. One energy saving light bulb could save around £2.50 a year, depending on how long you use your lights every day, and last around 10 times* longer.

* Source: Energy Saving Trust
What will happen when
Dateline for product phase out

Stage 1 September 1st 2009
All non-clear (frosted, opal, etc.) incandescent lamps including mushroom and decorative shapes
Clear finish, high-wattage incandescent lamps greater or equal to 100W
Clear incandescent lamps with 75W and lower, F and G energy class
All non-clear halogen lamps including linear halogen (DEQ) and G9 burners
Clear halogen lamps 75W and higher including linear halogen (DEQ) and G9 burners with 'D' energy class or lower

Stage 2 September 1st 2010
Clear incandescent lamps with a wattage of 75W or higher
Clear halogen lamps 60W or higher, 'D' class or lower

Stage 3 September 1st 2011
Clear incandescent lamps with a wattage of 60W or higher
Clear halogen lamps 40W or higher, 'D' class or lower

Stage 4 September 1st 2012
Clear incandescent lamps with a wattage below 60W
Clear halogen lamps 25W or higher, 'D' class or lower

Stage 5 September 1st 2013
Performance standard increase for all lamps (lifetime, etc.)

Stage 6 September 1st 2016
All lamps with energy efficiency label 'C' (except linear halogen (DEQ) and G9 burners)

Products that are not included in the scope of the ErP regulation:
- True colour lamps (according to specified colour coordinates)
- Directional lamps (reflector lamps)
- Lamps with lumen less than 60 lm and higher than 12,000 lm
- UV lamps (according to specific radiation requirements)
- CFL lamps with non-integrated ballast
- High-intensity discharge lamps
- E14/E27/B22/B15 lamps with voltage equal or less than 60V and without integrated transformer (till 2013)
- S14, S15 and S19 base linear incandescent lamps till 2012

For special purpose lamps, the following information shall be clearly and prominently indicated on their packaging and in all forms of product information accompanying the lamp when it is placed on the market:
- Their intended purpose and
- That they are not suitable for household room illumination

Due to limited space on the packaging we will use graphical elements (pictogram) instead of multilingual text.

The Environment:
There are a number of estimates, ranging from 24 million to 39 million tons of annual carbon dioxide emissions that will be eliminated with the full implementation of the EU regulations. GE Lighting is fully committed to reducing carbon emissions, and as member of the European Lamp Companies Federation it helped develop the new regulations that are now being implemented.

www.gelighting.com/eu

GE Lighting is constantly developing and improving its products. For this reason, all product descriptions in this brochure are intended as a general guide, and we may change specifications from time to time in the interest of product development, without prior notification or public announcement. All descriptions in this publication present only general particulars of the goods to which they refer and shall not form part of any contract. Data in this guide has been obtained in controlled experimental conditions. However, GE Lighting cannot accept any liability arising from the reliance on such data to the extent permitted by law.