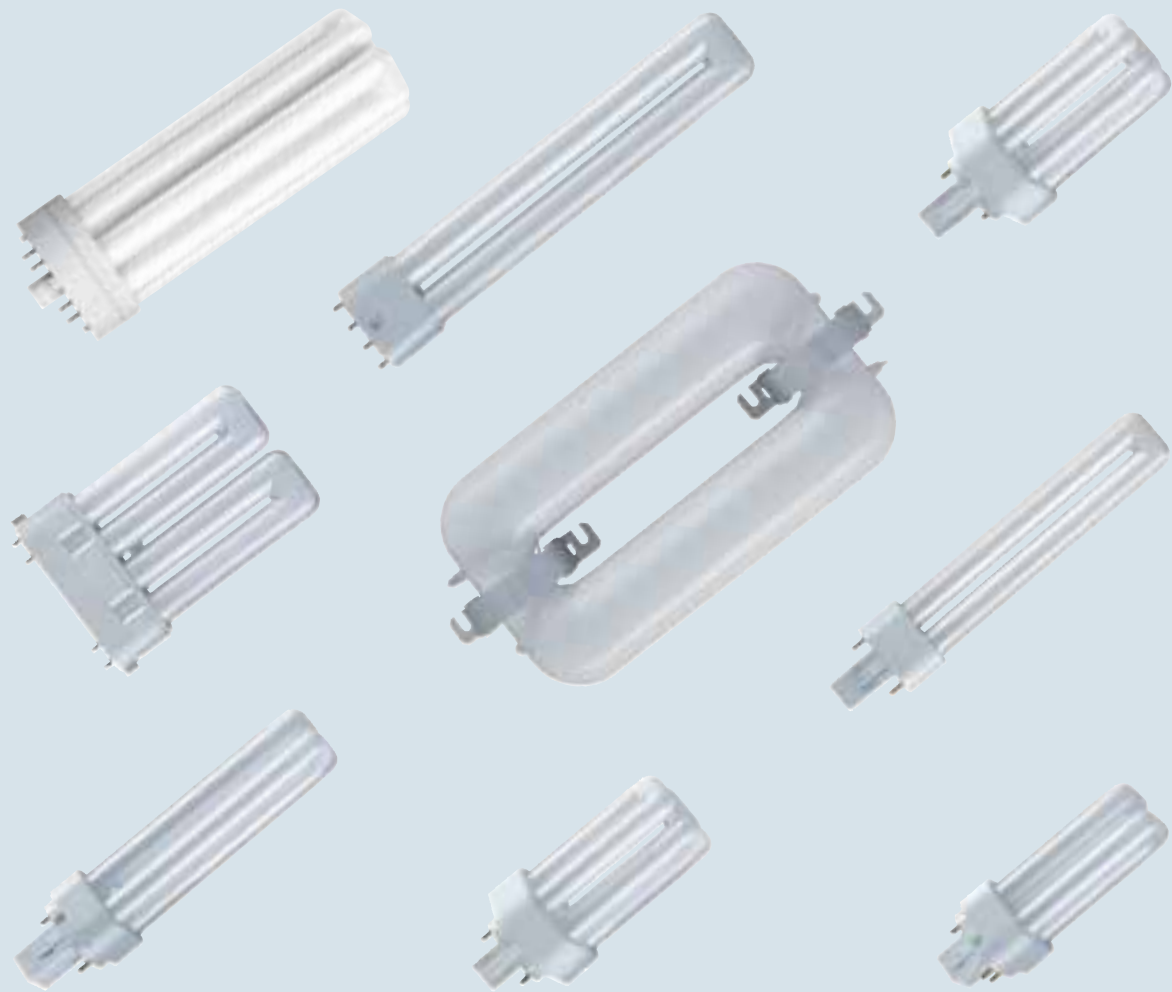




Compact fluorescent lamps

Economy in compact form.



More light, less energy and pretty to look at – three good reasons to choose compact fluorescent lamps from OSRAM. They consume considerably less electricity than ordinary light bulbs. They last much longer. And they can be used in place of almost any ordinary light bulb because they are so compact. To see how bright they can be, fit an OSRAM DULUX® EL LONGLIFE 23 W lamp into a luminaire designed to take a maximum of 60 W. It will give out as much light as a 120 W light bulb. That's twice as bright. And as for their economy, they'll last up to 15 times as long as an ordinary light bulb and consume around 80% less

electricity for the same amount of light. Every OSRAM DULUX® EL LONGLIFE lamp will save you many times what it costs.

Our compact fluorescent lamps are also good for the environment. An OSRAM DULUX® EL LONGLIFE 20 W, for example, will save up to 1200 kW/h of electricity compared with an ordinary light bulb. Compact fluorescent lamps from OSRAM are the bright and economical alternatives to ordinary light bulbs. They reduce electricity costs by as much as 80% compared with light bulbs of the same brightness, and last up to 15 times longer.



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| For information on OSRAM DULUX® EL retail products, ask for our brochure entitled "They deserve your complete trust: OSRAM DULUX® energy-saving lamps" or go to our website at www.osram.com . | 3.01 |



Big on economy, small in size and consumption



**No more light bulbs:
fit OSRAM DULUX® EL CLASSIC
instead.**

You can use compact fluorescent lamps with the classic bulb shape wherever you previously had ordinary light bulbs. They provide a particularly soft glare-free light. The OSRAM DULUX® EL CLASSIC is ideal for all free-burning and decorative applications.

Compact pin-base lamps.

Pin-base lamps cover a wide range of applications, both indoors and outdoors. OSRAM DULUX® S and S/E have an extremely low profile. They are ideal for compact low-profile luminaires. OSRAM DULUX® D and D/E are perfect for miniaturised luminaires. OSRAM DULUX® T and T/E PLUS are one third shorter than the D and D/E versions yet produce a

comparable output. They are suitable for small unconventional luminaires and downlights with shallow mounting depths and for lighting systems. Indoor lighting systems often include luminaires in which high ambient temperatures occur (narrow downlights, for example). To overcome this problem OSRAM has developed the OSRAM DULUX® T/E IN PLUS. Its maximum luminous flux has been set so that it produces 90% of this maximum between 10 °C and 70 °C. For modern louvre ceilings, OSRAM offers OSRAM DULUX® L and F. They are only half as long as tubular fluorescent lamps yet offer more or less the same luminous flux. Compact fluorescent lamps such as the OSRAM DULUX® L SP (moisture-proof and with an ECG system) can also be used in outdoor lighting systems. These lamps achieve their maximum luminous flux at an ambient temperature of 5 °C.

| Incandescent lamp | | OSRAM DULUX® EL LONGLIFE |
|--------------------------|---|-------------------------------------|
| 15 W | → | 3 W |
| 25 W | → | 5 W |
| 40 W | → | 7 W |
| 60 W | → | 11 W |
| 75 W | → | 15 W |
| 100 W | → | 20 W |
| 120 W | → | 23 W |
| 150 W | → | 30 W |

15 x 1000 h ≙ 15000 h

100 % 20 %

Average life

Power consumption



This thermographic comparison reveals that an incandescent lamp converts 95% of its electrical energy into heat and only 5% into light. OSRAM DULUX® EL produces the same amount of light from 80% less electricity.



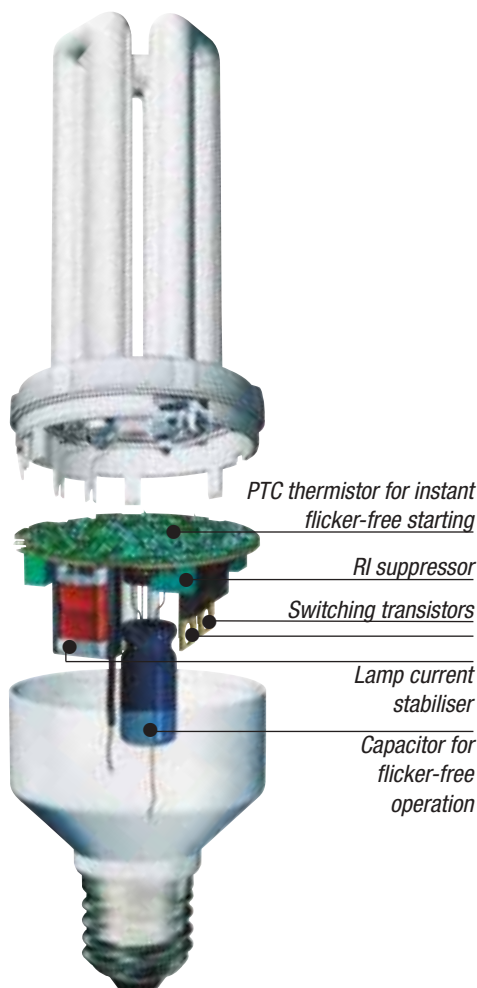
For new areas of application.

Thanks to new amalgam technology, we can now offer a new family of lamps – the CONSTANT series. These innovative compact fluorescent lamps – OSRAM DULUX® 120 W HO CONSTANT and OSRAM

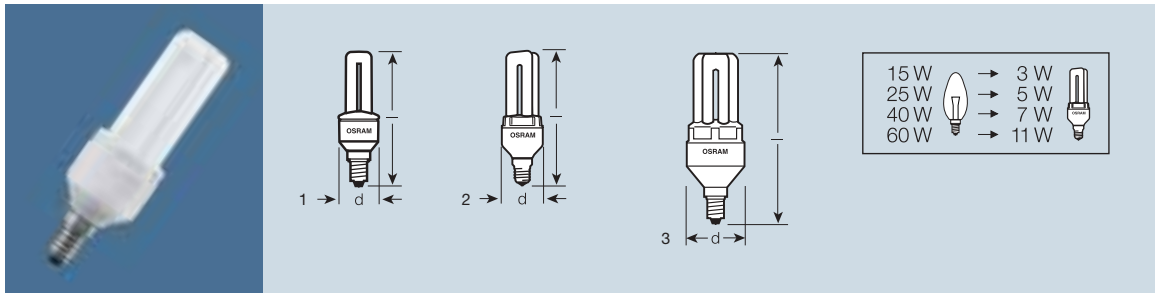
DULUX® L CONSTANT – offer high luminous flux over a wide range of temperatures. 90% is achieved between +5 °C and +70 °C. They can therefore be used in outdoor applications and also in high-intensity downlights.

Long life: the ENDURA® system.

The ENDURA® system has been developed specifically for places where relamping involves extremely high costs, such as in tunnels or factories. The OSRAM ENDURA® lamp has system life of 60,000 hours. And it provides quantities of light that other fluorescent lamps simply cannot match. The 70 W version produces 6500 lumen, the 100 W version 8000 lumen and the 150 W version 12,000 lumen. At 80 lm/W, its luminous efficacy is also higher than that of any other electrodeless fluorescent lamp. Its low height means that it can be used in low-profile luminaires.



OSRAM DULUX® EL LONGLIFE E14



| Product reference | Product number | W | V/Hz | | |
|--|----------------|----|---------------|----|--------------------|
| OSRAM DULUX® EL LONGLIFE E14 | | | | | |
| DULUX EL LL 3 W/827 E14 | 4050300502953 | 3 | 220-240/50-60 | 30 | LUMILUX Warm White |
| DULUX EL LL 5 W/827 E14 | 4050300314747 | 5 | 220-240/50-60 | 40 | LUMILUX Warm White |
| DULUX EL LL 7 W/827 E14 | 4050300315157 | 7 | 220-240/50-60 | 55 | LUMILUX Warm White |
| DULUX EL LL 11 W/827 E14 ¹⁾³⁾ | 4050300811451 | 11 | 220-240/50-60 | 90 | LUMILUX Warm White |

| Product reference | Ra | Im | | d [mm] | l [mm] | g | No. | |
|--|-----|-----|-----|--------|---------|----|-----|----|
| DULUX EL LL 3 W/827 E14 | 1 B | 100 | E14 | 30 | 115 ± 3 | 40 | 1 | 10 |
| DULUX EL LL 5 W/827 E14 | 1 B | 240 | E14 | 36 | 119 ± 3 | 42 | 2 | 10 |
| DULUX EL LL 7 W/827 E14 | 1 B | 400 | E14 | 36 | 119 ± 3 | 42 | 2 | 10 |
| DULUX EL LL 11 W/827 E14 ¹⁾³⁾ | 1 B | 660 | E14 | 45 | 126 ± 3 | 62 | 3 | 10 |

OSRAM DULUX® EL LONGLIFE E14 lamps are not suitable for use with dimmers or electronic switches.
Use outdoors only in enclosed and ventilated luminaires.

NEW
NEW

NEW
NEW

Average life is 15,000 hours, corresponding to around 15 years at about 2.7 hours per day. They are ideal for small luminaires. A total of four wattages are available for the large range of E14 applications.

- Luminaires restricted to 40 W incandescent lamps can be made brighter with OSRAM DULUX® EL LONGLIFE E14 11 W lamps.
- Very low weight.

Commercial applications:

Restaurants, hotels, foyers, corridors and offices. Major advantage: much longer relamping intervals.

Domestic applications:

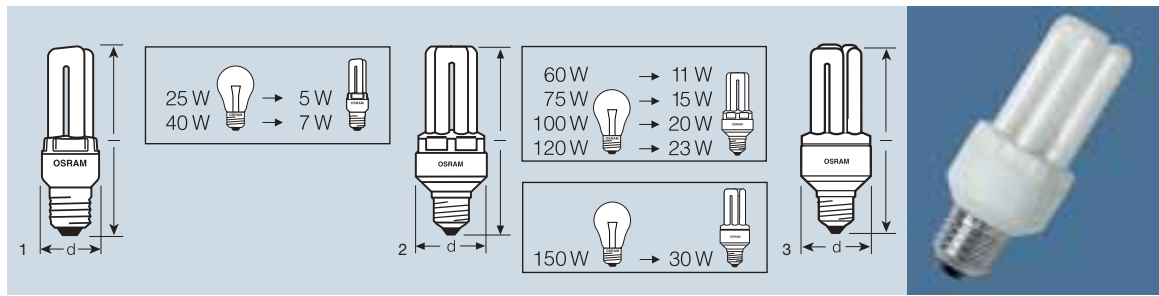
Small luminaires, in particular low-profile wall and ceiling luminaires, floor-standing lights and table lights for all rooms, especially where the lamps need to last a long time or have to withstand frequent on/off switching (500,000 switching operations²⁾).



OSRAM DULUX® EL LONGLIFE E14 are particularly compact and will therefore fit in small luminaires.

3)





| Product reference | Product number | W | V/Hz | | |
|--|----------------|----|-------------------|-----|------------------------------------|
| OSRAM DULUX® EL LONGLIFE E27 | | | | | |
| DULUX EL LL 5 W/827 E27 | 4050300357430 | 5 | 220...240/50...60 | 40 | LUMILUX Warm White |
| DULUX EL LL 7 W/827 E27 | 4050300288819 | 7 | 220...240/50...60 | 55 | LUMILUX Warm White ¹⁾ |
| DULUX EL LL 11 W/827 E27 ⁴⁾ | 4050300811598 | 11 | 220...240/50...60 | 90 | LUMILUX Warm White ¹⁾²⁾ |
| DULUX EL LL 15 W/827 E27 ⁴⁾ | 4050300811635 | 15 | 220...240/50...60 | 120 | LUMILUX Warm White ¹⁾²⁾ |
| DULUX EL LL 20 W/827 E27 | 4050300811673 | 20 | 220...240/50...60 | 160 | LUMILUX Warm White ¹⁾²⁾ |
| DULUX EL LL 23 W/827 E27 | 4050300028965 | 23 | 220...240/50...60 | 185 | LUMILUX Warm White ¹⁾²⁾ |
| DULUX EL LL 30 W/827 E27 | 4050300856827 | 30 | 220...240/50...60 | 160 | LUMILUX Warm White ¹⁾²⁾ |

| Product reference | R _a | Im | | d [mm] | l [mm] | | No. | |
|--|----------------|------|-----|--------|---------|-----|-----|----|
| DULUX EL LL 5 W/827 E27 | 1 B | 240 | E27 | 36 | 113 ± 3 | 42 | 1 | 10 |
| DULUX EL LL 7 W/827 E27 | 1 B | 400 | E27 | 36 | 113 ± 3 | 42 | 1 | 10 |
| DULUX EL LL 11 W/827 E27 ⁴⁾ | 1 B | 660 | E27 | 45 | 117 ± 3 | 62 | 2 | 10 |
| DULUX EL LL 15 W/827 E27 ⁴⁾ | 1 B | 900 | E27 | 45 | 128 ± 3 | 65 | 2 | 10 |
| DULUX EL LL 20 W/827 E27 | 1 B | 1230 | E27 | 45 | 145 ± 3 | 73 | 2 | 10 |
| DULUX EL LL 23 W/827 E27 | 1 B | 1500 | E27 | 58 | 173 ± 3 | 100 | 2 | 10 |
| DULUX EL LL 30 W/827 E27 | 1 B | 1900 | E27 | 58 | 180 ± 3 | 165 | 3 | 10 |

OSRAM DULUX® EL LONGLIFE lamps with B22d base available on request.
 OSRAM DULUX® EL LONGLIFE lamps are not suitable for use with dimmers or electronic switches.
 Use outdoors only in enclosed and ventilated luminaires.



These compact fluorescent lamps offer high luminous efficacy with up to 80% savings in electricity costs. The E27 base means they can be easily fitted instead of ordinary light bulbs. These lamps also have excellent colour rendering and excellent light distribution.

- Extremely compact dimensions.
- Average life is 15,000 hours, corresponding to around 15 years at about 2.7 hours per day.
- Universal burning position.
- Low weight.
- Flicker-free starting and flicker-free operation.
- Reliable starting down to -30 °C (30 W down to -10 °C).
- More light without temperature problems in luminaires designed for ordinary light bulbs.
- OSRAM DULUX® EL 15 W and 20 W lamps are also available in 110 to 130 V versions (some of the technical data is different).

Commercial applications:

Restaurants, hotels, foyers, ticket offices, corridors, doctors' surgeries and offices.
 Major advantage: much longer relamping intervals; meets the highest demands in terms of frequent on/off switching.

Domestic applications:

All rooms, especially where the lamps need to last a long time or have to withstand frequent on/off switching (500,000 switching operations³⁾).

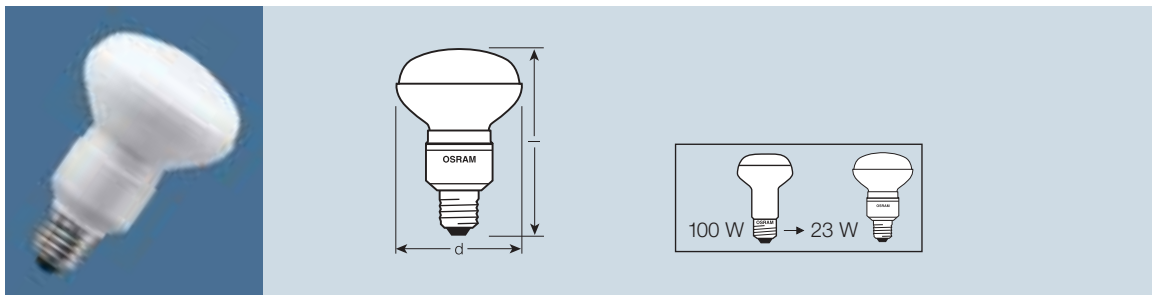


OSRAM DULUX® EL LONGLIFE lamps are ideal for constant economical lighting.

1) Also available in LUMILUX® Cool White (840) on request
 2) Also available in LUMILUX® Daylight (860) on request (approx. 5% less luminous flux)
 3) Switching cycle: 90 min on, 15 min off



OSRAM DULUX® EL CONCENTRA® R80 E27 ELECTRODE-LESS OSRAM DULUX® EL LONGLIFE CLASSIC A E27 ELECTRODE-LESS

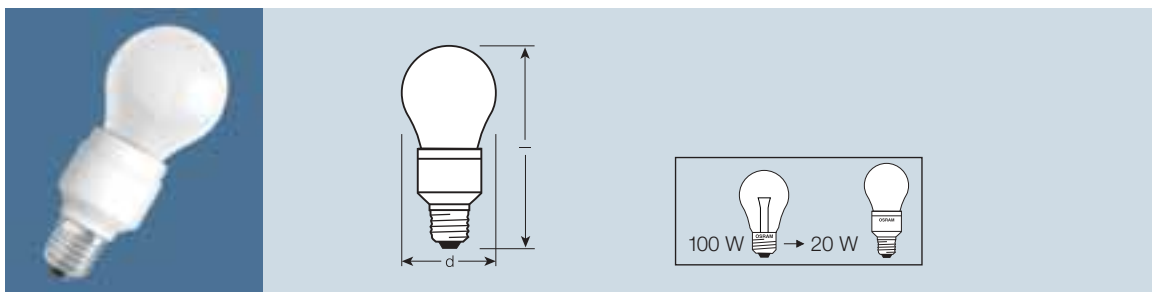


| Product reference | Product number | W | V/Hz | | | | | |
|---|----------------|----------------|-------------------|-----|--------------------|---------|-----|----|
| OSRAM DULUX® EL CONCENTRA® R80 E27 | | | | | | | | |
| DULUX EL C R80 23 W/827 | 4008321067401 | 23 | 220...240/50...60 | 170 | LUMILUX Warm White | | | |
| Product reference | | R _a | cd | | d [mm] | l [mm] | | |
| DULUX EL C R80 23 W/827 | | 1 B | 500 | E27 | 80 | 125 ± 3 | 190 | 10 |

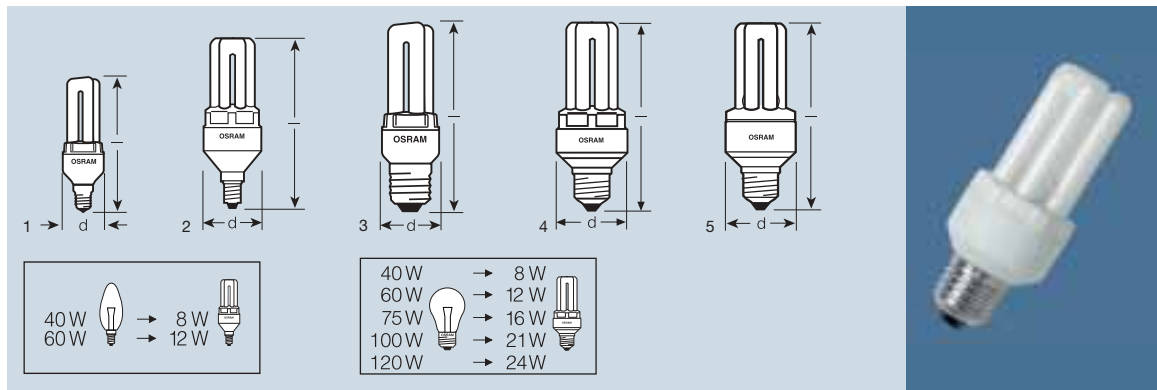
Innovative and particularly bright: OSRAM DULUX® EL CONCENTRA® R80 23 W + CL A 20 W

Electrode-less OSRAM DULUX® EL lamps are new high-intensity electrode-less compact fluorescent lamp as an economical replacement for Concentra R80 lamps and incandescent lamps.

- Extremely rapid starting (QUICK START) thanks to innovative, electrode-less technology
- Very high luminous intensity/luminous flux
- Long average life of 15,000 hours
- Around 500,000 switching cycles¹⁾



| Product reference | Product number | W | V/Hz | | | | | |
|---|----------------|----------------|-------------------|-----|--------------------|---------|-----|----|
| OSRAM DULUX® EL LONGLIFE CLASSIC A E27 | | | | | | | | |
| DULUX EL LL CLASSIC A | ²⁾ | 20 | 220...240/50...60 | 160 | LUMILUX Warm White | | | |
| Product reference | | R _a | lm | | d [mm] | l [mm] | | |
| DULUX EL LL CLASSIC A | | 1 B | 1250 | E27 | 60 | 135 ± 3 | 121 | 10 |



| Product reference | Product number | W | V/Hz | | |
|--------------------------------|-----------------------|----|-------------------|-----|------------------------------------|
| OSRAM DULUX® EL E14/E27 | | | | | |
| DULUX EL 8 W/827 E14 | 4008321 068309 | 8 | 220...240/50...60 | 75 | LUMILUX Warm White |
| DULUX EL 12 W/827 E14 | 4008321 068569 | 12 | 220...240/50...60 | 120 | LUMILUX Warm White |
| DULUX EL 8 W/827 E27 | 4008321 068521 | 8 | 220...240/50...60 | 75 | LUMILUX Warm White ¹⁾ |
| DULUX EL 12 W/827 E27 | 4008321 068583 | 12 | 220...240/50...60 | 120 | LUMILUX Warm White ¹⁾²⁾ |
| DULUX EL 16 W/827 E27 | 4008321 068989 | 16 | 220...240/50...60 | 125 | LUMILUX Warm White ¹⁾²⁾ |
| DULUX EL 21 W/827 E27 | 4008321 069214 | 21 | 220...240/50...60 | 160 | LUMILUX Warm White ¹⁾²⁾ |
| DULUX EL 24 W/827 E27 | 4008321 069290 | 24 | 220...240/50...60 | 185 | LUMILUX Warm White ¹⁾²⁾ |

| Product reference | Ra | lm | | d [mm] | l [mm] | | No. | |
|-----------------------|-----|------|-----|--------|---------|----|-----|----|
| DULUX EL 8 W/827 E14 | 1 B | 400 | E14 | 36 | 119 ± 3 | 42 | 1 | 10 |
| DULUX EL 12 W/827 E14 | 1 B | 660 | E14 | 45 | 126 ± 3 | 62 | 2 | 10 |
| DULUX EL 8 W/827 E27 | 1 B | 400 | E27 | 36 | 113 ± 3 | 42 | 3 | 10 |
| DULUX EL 12 W/827 E27 | 1 B | 660 | E27 | 45 | 117 ± 3 | 62 | 4 | 10 |
| DULUX EL 16 W/827 E27 | 1 B | 900 | E27 | 45 | 128 ± 3 | 74 | 4 | 10 |
| DULUX EL 21 W/827 E27 | 1 B | 1230 | E27 | 45 | 145 ± 3 | 78 | 4 | 10 |
| DULUX EL 24 W/827 E27 | 1 B | 1500 | E27 | 52 | 173 ± 3 | 92 | 5 | 10 |

OSRAM DULUX® EL 12, 16 and 21 W lamps with B22d base available on request.
 OSRAM DULUX® EL lamps are not suitable for use with dc supplies, dimmers or electronic switches.
 Use outdoors only in enclosed and ventilated luminaires.

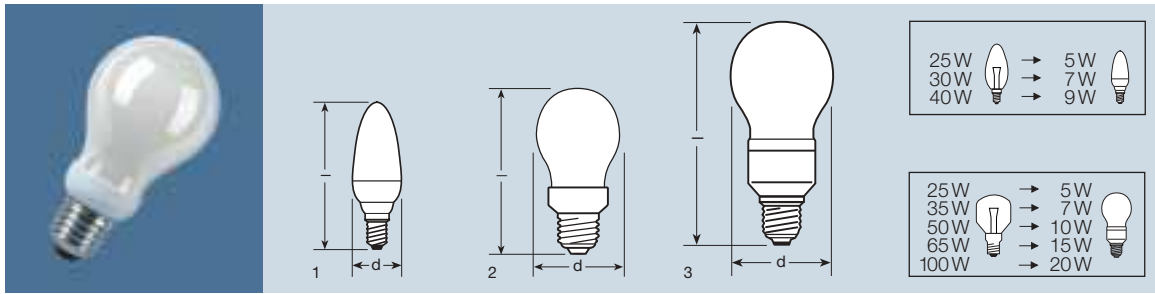


OSRAM DULUX® EL lamps are ideal for indoor use.

- With around 10,000 switching cycles³⁾ and an average life of 10,000 hours.
- Excellent colour rendering.
- Low weight.
- Same instant flicker-free starting as ordinary light bulbs and flicker-free operation.
- Straightforward range with two E14 wattages and five E27 wattages.

1) Also available in LUMILUX® Cool White (840) on request
 2) Also available in LUMILUX® Daylight (860) on request (approx. 5% less luminous flux)
 3) Switching cycle: 60 min on, 15 min off

OSRAM DULUX® EL CLASSIC



| Product reference | Product number | W | V/Hz | | |
|---|----------------|----|-------------------|-----|--------------------|
| OSRAM DULUX® EL CLASSIC E14/E27 | | | | | |
| DULUX EL CL A 5 W/827 E27 | 4008321065797 | 5 | 220...240/50...60 | 40 | LUMILUX Warm White |
| DULUX EL CL A 7 W/827 E27 ²⁾ | 4008321065773 | 7 | 220...240/50...60 | 55 | LUMILUX Warm White |
| DULUX EL CL A 10 W/827 E27 | 4008321065896 | 10 | 220...240/50...60 | 80 | LUMILUX Warm White |
| DULUX EL CL A 15 W/827 E27 | 4008321066176 | 15 | 220...240/50...60 | 120 | LUMILUX Warm White |
| DULUX EL CL A 20 W/827 E27 | 4008321065933 | 20 | 220...240/50...60 | 160 | LUMILUX Warm White |
| DULUX EL CL B 5 W/827 E14 | 4008321066299 | 5 | 220...240/50...60 | 40 | LUMILUX Warm White |
| DULUX EL CL B 7 W/827 E14 | 4008321066329 | 7 | 220...240/50...60 | 55 | LUMILUX Warm White |
| DULUX EL CL B 9 W/827 E14 | 4008321066350 | 9 | 220...240/50...60 | 55 | LUMILUX Warm White |

| Product reference | R _a | l _m | | d [mm] | l [mm] | | No. | |
|---|----------------|----------------|-----|--------|----------|-----|-----|----|
| DULUX EL CL A 5 W/827 E27 | 1 B | 150 | E27 | 60 | 111 ± 3 | 60 | 2 | 10 |
| DULUX EL CL A 7 W/827 E27 ²⁾ | 1 B | 350 | E27 | 60 | 111 ± 3 | 60 | 2 | 10 |
| DULUX EL CL A 10 W/827 E27 | 1 B | 500 | E27 | 60 | 113 ± 3 | 60 | 2 | 10 |
| DULUX EL CL A 15 W/827 E27 | 1 B | 800 | E27 | 65 | 142 ± 3 | 102 | 3 | 10 |
| DULUX EL CL A 20 W/827 E27 | 1 B | 1160 | E27 | 70 | 152 ± 3 | 113 | 3 | 10 |
| DULUX EL CL B 5 W/827 E14 | 1 B | 160 | E14 | 37 | 99.5 ± 3 | 50 | 1 | 10 |
| DULUX EL CL B 7 W/827 E14 | 1 B | 280 | E14 | 42.5 | 117 ± 3 | 53 | 1 | 10 |
| DULUX EL CL B 9 W/827 E14 | 1 B | 340 | E14 | 42.5 | 117 ± 3 | 53 | 1 | 10 |

OSRAM DULUX® EL CLASSIC lamps with B22d base available on request.
 OSRAM DULUX® EL CLASSIC lamps are not suitable for use with dc supplies, dimmers or electronic switches.
 Use outdoors only in enclosed and ventilated luminaires.

This compact fluorescent lamp is ideal for decorative and free-burning applications. The opal outer bulb provides a particularly soft light. Average life is 10,000 hours, corresponding to around 10 years at about 2.7 hours per day. Because the dimensions are the same, ordinary light bulbs can be replaced by OSRAM DULUX® EL CLASSIC lamps without any problem at all.

Domestic applications:

All rooms, especially where the lamps are visible, need to last a long time or have to withstand frequent on/off switching (10,000 switching operations¹⁾).

Commercial applications:

- Restaurants, hotels and similar prestige applications. Also suitable for use in enclosed and ventilated outdoor luminaires, even at low ambient temperatures.



OSRAM DULUX® EL CLASSIC combines the aesthetic features of the light bulb with the economic benefits of the fluorescent lamp.



NEW

10 000 h

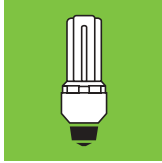
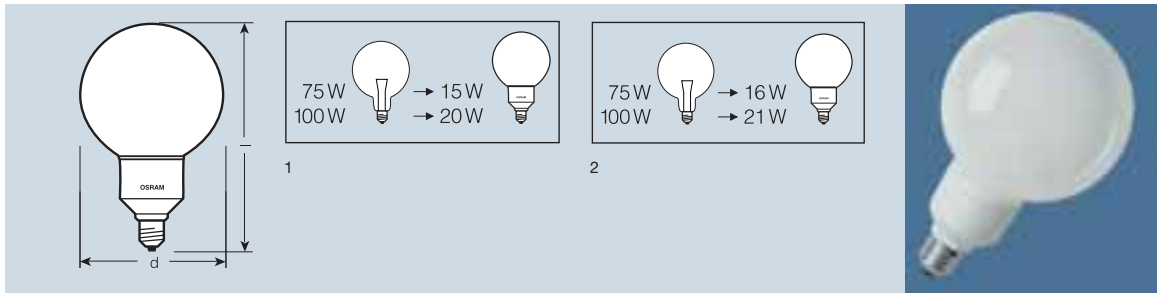
10 000 h
10/2006

NEW





OSRAM DULUX® EL LONGLIFE GLOBE OSRAM DULUX® EL GLOBE



| Product reference | Product number | W | V/Hz | | | | | |
|---|----------------|------|-------------------|--------|----------------------------------|-----|-----|----|
| OSRAM DULUX® EL LONGLIFE GLOBE E27 | | | | | | | | |
| DULUX EL LL GL 15 W/827 | 4050300276175 | 15 | 220...240/50...60 | 120 | LUMILUX Warm White ¹⁾ | | | |
| DULUX EL LL GL 20 W/827 ⁴⁾ | 4050300276274 | 20 | 220...240/50...60 | 160 | LUMILUX Warm White ¹⁾ | | | |
| Product reference | R _a | Im | | d [mm] | l [mm] | | No. | |
| DULUX EL LL GL 15 W/827 | 1 B | 700 | E27 | 100 | 169 ± 3 | 150 | 1 | 10 |
| DULUX EL LL GL 20 W/827 ⁴⁾ | 1 B | 1150 | E27 | 120 | 190 ± 3 | 155 | 1 | 10 |

OSRAM DULUX® EL LONGLIFE GLOBE lamps with B22d base available on request.
OSRAM DULUX® EL LONGLIFE GLOBE lamps are not suitable for use with dc supplies, dimmers or electronic switches.
Use outdoors only in enclosed and ventilated luminaires.



OSRAM DULUX® EL LONGLIFE GLOBE offers pleasant glare-free light. The plastic outer bulb with its new latching mechanism reduces the overall weight and improves impact resistance. The OSRAM DULUX® EL LONGLIFE GLOBE offers the same comfort and economy as other OSRAM DULUX® EL LONGLIFE lamps.

- Average life is 15,000 hours, corresponding to around 15 years at about 2.7 hours per day.
- Particularly suitable for use in enclosed and ventilated outdoor luminaires, even at low ambient temperatures.
- With more than 500,000 switching cycles²⁾ and an average life of 15,000 hours.

| Product reference | Product number | W | V/Hz | | | | | |
|----------------------------------|----------------|------|-------------------|--------|--------------------|-----|-----|----|
| OSRAM DULUX® EL GLOBE E27 | | | | | | | | |
| DULUX EL GL 16 W/827 | 4008321066039 | 16 | 220...240/50...60 | 120 | LUMILUX Warm White | | | |
| DULUX EL GL 21 W/827 | 4008321066053 | 21 | 220...240/50...60 | 160 | LUMILUX Warm White | | | |
| Product reference | R _a | Im | | d [mm] | l [mm] | | No. | |
| DULUX EL GL 16 W/827 | 1 B | 700 | E27 | 100 | 169 ± 3 | 150 | 2 | 10 |
| DULUX EL GL 21 W/827 | 1 B | 1150 | E27 | 120 | 190 ± 3 | 155 | 2 | 10 |

OSRAM DULUX® EL GLOBE lamps are not suitable for use with dc supplies, dimmers or electronic switches.
Use outdoors only in enclosed and ventilated luminaires.



OSRAM DULUX® EL GLOBE offers pleasant glare-free light.

- They have the same comfort and economy features as the other OSRAM DULUX® EL lamps.

- Average life is 10,000 hours, corresponding to around 10 years at about 2.7 hours per day.
- With more than 10,000 switching cycles³⁾ and an average life of 10,000 hours.

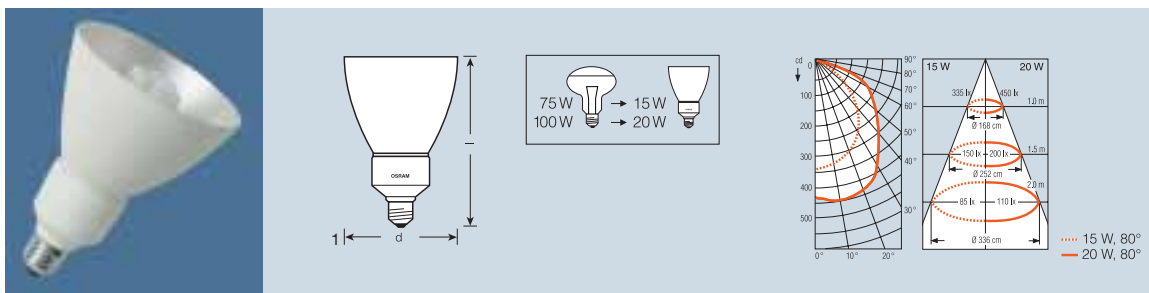
1) Also available in LUMILUX® Daylight on request (approx. 5% less luminous flux).

2) Switching cycle: 90 min on, 15 min off

3) Switching cycle: 60 min on, 15 min off



OSRAM DULUX® EL REFLECTOR OSRAM DULUX® EL PAR 38



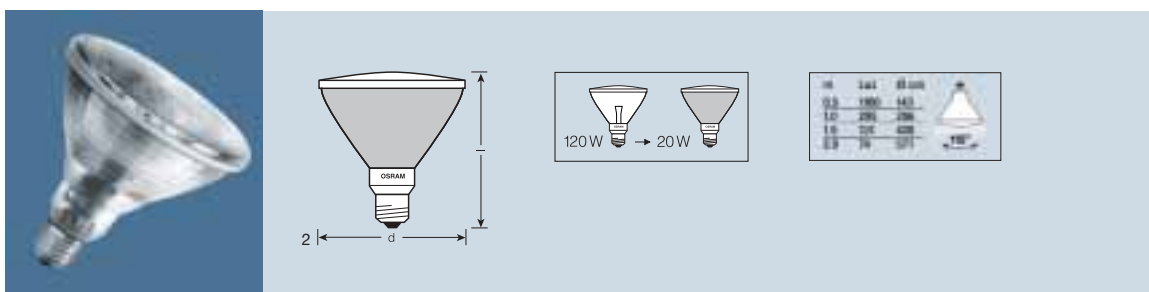
| Product reference | Product number | W | V/Hz | | |
|--------------------------------------|----------------|----|-------------------|-----|--------------------|
| OSRAM DULUX® EL REFLECTOR E27 | | | | | |
| DULUX EL REFL 15 W/827 | 4050300306094 | 15 | 220...240/50...60 | 110 | LUMILUX Warm White |
| DULUX EL REFL 20 W/827 | 4050300291703 | 20 | 220...240/50...60 | 135 | LUMILUX Warm White |

| Product reference | R _a | cd | | | d [mm] | l [mm] | g | No. | |
|------------------------|----------------|-----|-----|----|--------|---------|-----|-----|----|
| DULUX EL REFL 15 W/827 | 1 B | 335 | E27 | 80 | 102 | 143 ± 3 | 145 | 1 | 10 |
| DULUX EL REFL 20 W/827 | 1 B | 450 | E27 | 80 | 117.5 | 161 ± 3 | 170 | 1 | 10 |

OSRAM DULUX® EL REFLECTOR lamps are not suitable for use with dc supplies, dimmers or electronic switches. Use outdoors only in enclosed and ventilated luminaires.

OSRAM DULUX® EL REFLECTOR lamps replace conventional incandescent reflector lamps. They are ideal for spotlights and downlights.

- With around 500,000 switching cycles¹⁾ and an average life of 15,000 hours.



| Product reference | Product number | W | V/Hz | | |
|-----------------------------------|----------------|----|-------------------|-----|--------------------|
| OSRAM DULUX® EL PAR 38 E27 | | | | | |
| DULUX EL PAR 38 20 W/827 | 4008321076687 | 20 | 220...240/50...60 | 146 | LUMILUX Warm White |

| Product reference | R _a | cd | | | d [mm] | l [mm] | g | No. | |
|--------------------------|----------------|-----|-----|-----|--------|---------|-----|-----|----|
| DULUX EL PAR 38 20 W/827 | 1 B | 295 | E27 | 110 | 121 | 133 ± 3 | 263 | 2 | 10 |

Directional light in an attractive form: OSRAM DULUX® EL PAR 38

With the same dimensions, the attractive OSRAM DULUX® EL PAR 38 lamps are the new economical alternatives to conventional PAR 38 lamps.

- Replaces conventional incandescent reflector lamps and greatly reduces the thermal load on the objects it illuminates
- Long average life of 10,000 hours
- Around 10,000 switching cycles²⁾

3.10

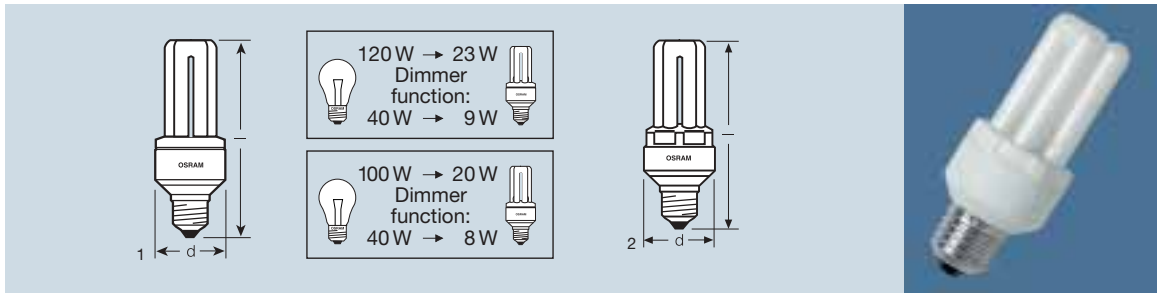
1) Switching cycle: 90 min on, 15 min off
2) Switching cycle: 60 min on, 15 min off



NEW



OSRAM DULUX® EL VARIO and OSRAM DULUX® EL DIM



| Product reference | Product number | W | V/Hz | | |
|--|----------------|----|-------------------|-----|--------------------|
| OSRAM DULUX® EL VARIO and OSRAM DULUX® EL DIM E27 | | | | | |
| DULUX EL VARIO 23 W/827 E27 ¹⁾ | 4050300512488 | 23 | 220...240/50...60 | 185 | LUMILUX Warm White |
| DULUX EL VARIO 20 W/827 E27 | 4008321132727 | 20 | 220...240/50...60 | 185 | LUMILUX Warm White |
| DULUX EL DIM | 4008321080370 | 20 | 220...240/50...60 | 125 | LUMILUX Warm White |

| Product reference | R _a | l _m | | d [mm] | l [mm] | | No. | |
|---|----------------|----------------|-----|--------|---------|-----|-----|----|
| DULUX EL VARIO 23 W/827 E27 ¹⁾ | 1 B | 1500 | E27 | 58 | 173 ± 3 | 110 | 1 | 10 |
| DULUX EL VARIO 20 W/827 E27 | 1 B | 1230 | E27 | 45 | 145 ± 3 | 79 | 2 | 10 |
| DULUX EL DIM | 1 B | 1230 | E27 | 58 | 158 ± 3 | 110 | 1 | 10 |

OSRAM DULUX® EL VARIO lamps with B22d base available on request.
 OSRAM DULUX® EL VARIO lamps are not suitable for use with dc supplies, external dimmers or electronic switches.
 Use outdoors only in enclosed and ventilated luminaires. Permissible temperature range 15 to 50 °C.

NEW
NEW

NEW
NEW



With OSRAM DULUX® EL VARIO, energy-saving light can be varied without the need for dimmers. Simply switching the lamp off and on again within three seconds reduces its brightness by about a half. Power consumption is also reduced by more than half for additional energy savings.

- The OSRAM DULUX® EL VARIO can be switched any number of times; there is no need to leave the lamp off for a certain time before switching it on again.
- Like all OSRAM DULUX® EL lamps, the OSRAM DULUX® EL VARIO is not suitable for operation with existing dimmer switches but does offer its own “built-in” dimming option in all other applications.
- Average life is 15,000 hours, corresponding to around 15 years at about 2.7 hours per day.

Domestic applications:

Wherever the lighting level is to be varied.

Commercial applications:

Hotels, restaurants

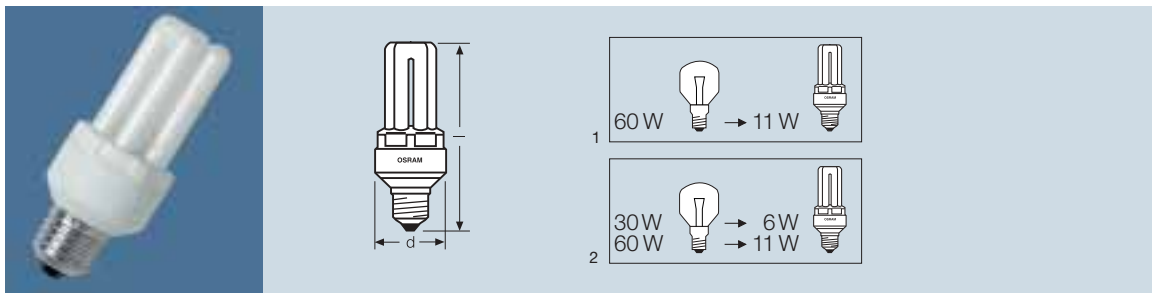
OSRAM DULUX® EL 20 W is now available in an infinitely **dimnable** version. The new OSRAM DULUX® EL DIM can be used in **all** applications with suitable leading-edge phase dimmers.

- E27 base.
- Extra long average life of 15,000 hours.
- Around 500,000 switching cycles²⁾.



1) Discontinued
 2) Switching cycle: 90 min on, 15 min off

OSRAM DULUX® EL SOLAR 12 V DC OSRAM DULUX® EL SOLAR 12 V DC VARIO



NEW
NEW

NEW
NEW

| Product reference | Product number | W | V/Hz ²⁾ | | |
|--|----------------|----|--------------------|------|--------------------|
| OSRAM DULUX® EL SOLAR 12 V DC and SOLAR VARIO 12 V DC E27 | | | | | |
| DULUX EL 12 V DC | 4008321118370 | 11 | 12 V/- | 1000 | LUMILUX Warm White |
| DULUX EL 12 V DC VARIO | 4008321118417 | 11 | 12 V/- | 1000 | LUMILUX Warm White |

| Product reference | R _a | Im | | d [mm] | I [mA] | | No. | |
|------------------------|----------------|-----|-----|--------|---------|----|-----|----|
| DULUX EL 12 V DC | 1 B | 600 | E27 | 45 | 127 ± 3 | 75 | 1 | 10 |
| DULUX EL 12 V DC VARIO | 1 B | 600 | E27 | 45 | 127 ± 3 | 75 | 2 | 10 |

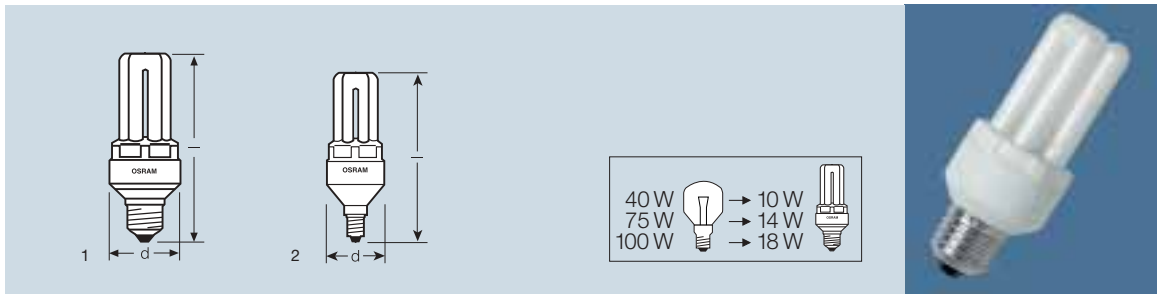
Battery and solar power: OSRAM DULUX® EL SOLAR 12 V DC, 12 V DC VARIO

New energy-saving lamp for 12 V dc voltage, developed primarily for use with solar power systems. The OSRAM DULUX® EL 12 V DC is also ideal for mobile use with batteries, for example when camping.

- Luminous flux of 600 lm
- E27 base
- Long average life of 10,000 hours
- Around 10,000 switching cycles¹⁾

OSRAM DULUX® EL SOLAR VARIO lamps can be dimmed without dimmers. Simply switching the lamp off and on again within three seconds reduces its brightness by about a half. Power consumption is also reduced by more than half. This means that additional energy savings are possible or generator capacity can be released so that other electronic equipment can be connected at the same time.





| Product reference | Product number | W | V/Hz | | |
|---|----------------|----|-------------------|-----|--------------------|
| OSRAM DULUX® EL FACILITY E14/E27 | | | | | |
| DULUX EL FCY 10 W/827 E27 | 4008321126290 | 10 | 220...240/50...60 | 80 | LUMILUX Warm White |
| DULUX EL FCY 10 W/827 E14 | 4008321126276 | 10 | 220...240/50...60 | 80 | LUMILUX Warm White |
| DULUX EL FCY 14 W/827 E27 | 4050300631905 | 14 | 220...240/50...60 | 110 | LUMILUX Warm White |
| DULUX EL FCY 18 W/827 E27 | 4008321118356 | 18 | 220...240/50...60 | 110 | LUMILUX Warm White |

| Product reference | R _a | Im | | d [mm] | l [mm] | | No. | |
|---------------------------|----------------|------|-----|--------|---------|----|-----|----|
| DULUX EL FCY 10 W/827 E27 | 1 B | 530 | E27 | 45 | 117 ± 3 | 63 | 1 | 10 |
| DULUX EL FCY 10 W/827 E14 | 1 B | 530 | E14 | 45 | 126 ± 3 | 68 | 2 | 10 |
| DULUX EL FCY 14 W/827 E27 | 1 B | 800 | E27 | 45 | 123 ± 3 | 70 | 1 | 10 |
| DULUX EL FCY 18 W/827 E27 | 1 B | 1100 | E27 | 45 | 137 ± 3 | 72 | 1 | 10 |

OSRAM DULUX® EL Facility lamps with B22d base available on request.
 OSRAM DULUX® EL Facility lamps are not suitable for use with external dimmers or electronic switches.
 Use outdoors only in enclosed and ventilated luminaires.

NEW
NEW

NEW

NEW
NEW

NEW

15000 h

QUICK START



This professional energy-saving lamp is ideal for use in conjunction with automatic disconnection circuits and motion detectors and in stairwells. It can be switched on and off an enormous number of times throughout its life.

- **Can be used for dc applications without restrictions and in emergency systems (176 to 310 V).**
- Average life according to IEC: 15,000 h.
- Rapid increase in luminous flux thanks to **Powerboost** circuit.
- No need to worry about switching cycles.

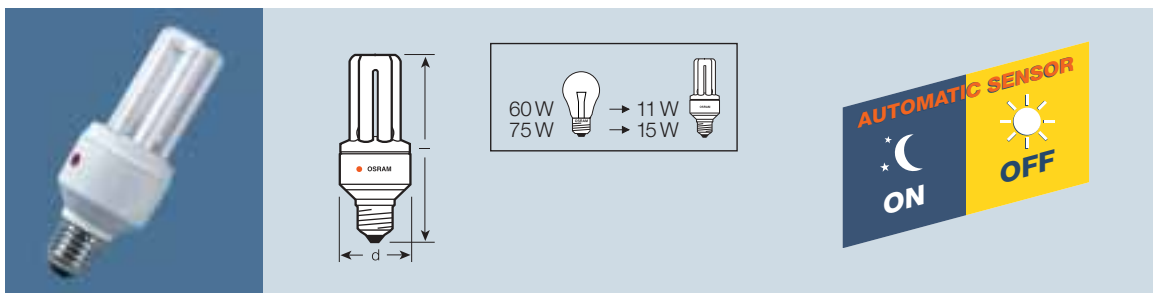
Domestic applications:

Wherever energy-saving lamps need to be switched on and off frequently.

Commercial applications:

Hotels, restaurants, facility management. Because it can be switched on and off an enormous number of times the OSRAM DULUX® EL Facility is perfect for stairwell lighting with automatic disconnection circuits.

OSRAM DULUX® EL SENSOR



NEW

| Product reference | Product number | W | V/Hz | | |
|-----------------------------------|----------------|----|-------------------|-----|--------------------|
| OSRAM DULUX® EL SENSOR E27 | | | | | |
| DULUX EL SENSOR | | | | | |
| 11 W/827 E27 | 4008321102300 | 11 | 220...240/50...60 | 90 | LUMILUX Warm White |
| 15 W/827 E27 | 4050300451299 | 15 | 220...240/50...60 | 130 | LUMILUX Warm White |

NEW

| Product reference | Ra | Im | | d [mm] | l [mm] | g | |
|-------------------|-----|-----|-----|--------|---------|----|----|
| DULUX EL SENSOR | | | | | | | |
| 11 W/827 E27 | 1 B | 660 | E27 | 45 | 120 ± 3 | 77 | 10 |
| 15 W/827 E27 | 1 B | 900 | E27 | 52 | 140 ± 3 | 85 | 10 |

OSRAM DULUX® EL SENSOR lamps are not suitable for use with dimmers, dc supplies or electronic switches. Use outdoors only in enclosed and ventilated luminaires.

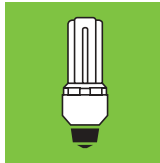
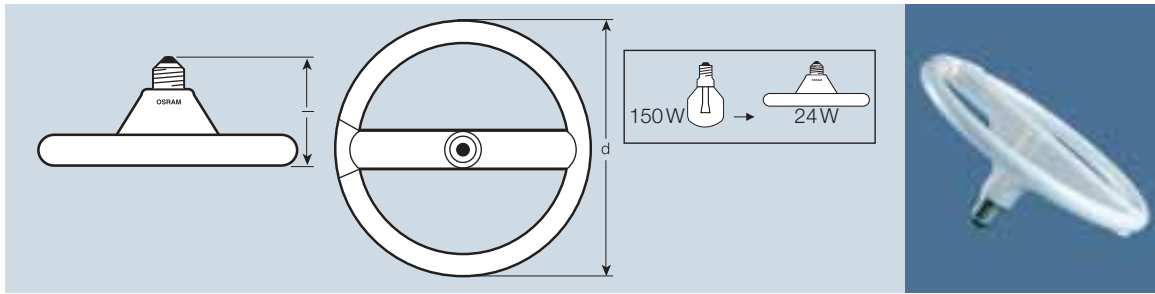


OSRAM DULUX® EL SENSOR automatically switches on at dusk and off again at dawn. The light sensors detect daylight on the basis of the spectral distribution.

- Intelligent microprocessor technology.
- Unaffected by interference light.
- Average life according to IEC: 15,000 h.



OSRAM DULUX® EL SENSOR lamps are ideal for home security lighting.



| Product reference | Product number | W | V/Hz | | | | | |
|-------------------------------|----------------|----|-------------------|-----|--------------------|--------|-----|---|
| OSRAM CIRCOLUX® EL E27 | | | | | | | | |
| CIRCOLUX EL 24 W/827 | 4050300626628 | 24 | 220...240/50...60 | 190 | LUMILUX Warm White | | | |
| Product reference | Ra | | Im | | d (mm) | l (mm) | g | |
| CIRCOLUX EL 24 W/827 | 1 B | | 1700 | E27 | 225 | 99 ± 3 | 170 | 4 |

CIRCOLUX® EL lamps are not suitable for use with dimmers or electronic switches.
Use outdoors only in enclosed luminaires.



OSRAM CIRCOLUX® EL is the high-output energy-saving lamp. It emits a warm and pleasant light similar to that from an ordinary light bulb. It also offers excellent colour rendering and ideal light distribution for general lighting. Thanks to its round low-profile design, OSRAM CIRCOLUX® EL is perfect for pendant luminaires.

- Low weight.
- Same comfort and economy as OSRAM DULUX® EL Longlife lamps.
- Suitable for dc operation.
- Up to 15 year life (if used for an average of around 2.7 hours a day).
- With around 500,000 switching cycles¹⁾ and a long average life of 15,000 hours.



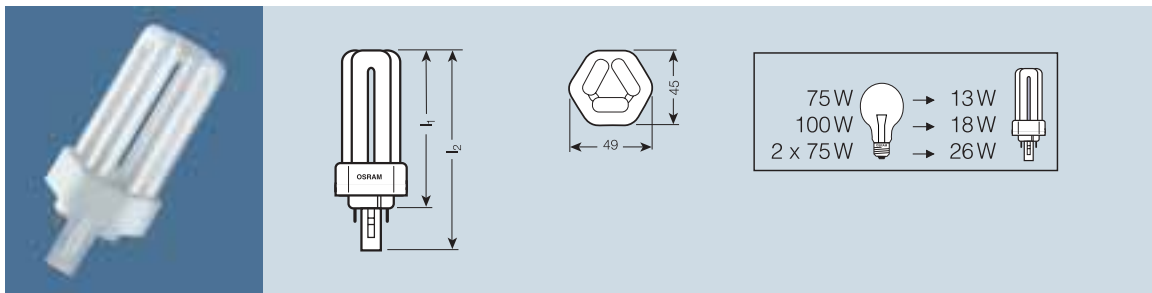
Restaurant owners in particular appreciate the advantages of this brightest energy-saving lamp.



OSRAM CIRCOLUX® EL looks great over tables.

1) Switching cycle: 90 min on, 15 min off

OSRAM DULUX® T PLUS for conventional control gear (CCG)



| Product reference | Product number | W | | R _a |
|----------------------------|----------------|----|--------------------|----------------|
| OSRAM DULUX® T PLUS | | | | |
| DULUX T 13 W/840 PLUS | 4050300446905 | 13 | LUMILUX Cool White | 1 B |
| DULUX T 13 W/830 PLUS | 4050300446929 | 13 | LUMILUX Warm White | 1 B |
| DULUX T 13 W/827 PLUS | 4050300446943 | 13 | LUMILUX INTERNA | 1 B |
| DULUX T 18 W/840 PLUS | 4050300333465 | 18 | LUMILUX Cool White | 1 B |
| DULUX T 18 W/830 PLUS | 4050300333489 | 18 | LUMILUX Warm White | 1 B |
| DULUX T 18 W/827 PLUS | 4050300333502 | 18 | LUMILUX INTERNA | 1 B |
| DULUX T 26 W/840 PLUS | 4050300342047 | 26 | LUMILUX Cool White | 1 B |
| DULUX T 26 W/830 PLUS | 4050300342061 | 26 | LUMILUX Warm White | 1 B |
| DULUX T 26 W/827 PLUS | 4050300342085 | 26 | LUMILUX INTERNA | 1 B |

| Product reference | lm | | l ₁ max. [mm] | l ₂ max. [mm] | IEC l ₁ [mm] | |
|-----------------------|------|---------|--------------------------|--------------------------|-------------------------|----|
| DULUX T 13 W/840 PLUS | 900 | GX24d-1 | 90 | 113 | 90 | 10 |
| DULUX T 13 W/830 PLUS | 900 | GX24d-1 | 90 | 113 | 90 | 10 |
| DULUX T 13 W/827 PLUS | 900 | GX24d-1 | 90 | 113 | 90 | 10 |
| DULUX T 18 W/840 PLUS | 1200 | GX24d-2 | 100 | 123 | 110 | 10 |
| DULUX T 18 W/830 PLUS | 1200 | GX24d-2 | 100 | 123 | 110 | 10 |
| DULUX T 18 W/827 PLUS | 1200 | GX24d-2 | 100 | 123 | 110 | 10 |
| DULUX T 26 W/840 PLUS | 1800 | GX24d-3 | 115 | 138 | 130 | 10 |
| DULUX T 26 W/830 PLUS | 1800 | GX24d-3 | 115 | 138 | 130 | 10 |
| DULUX T 26 W/827 PLUS | 1800 | GX24d-3 | 115 | 138 | 130 | 10 |

All the lamps in the successful OSRAM DULUX® T, T/E and T/E IN series have the following positive properties:

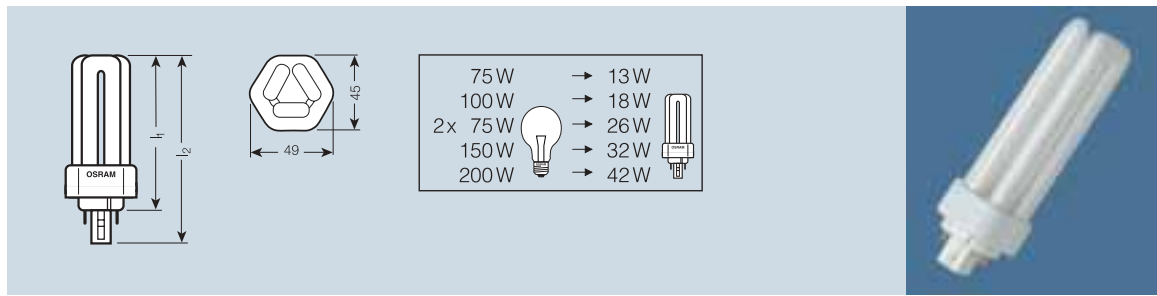
- Improved maintenance
- Longer lamp life and service life
- Mercury content reduced from 4.5 to 3 mg
- Improved start-up behaviour
- Integrated ignition assistance for faster starting

OSRAM DULUX® T 18 W PLUS lamps are suitable only for operating with 0.22 A control gear. This compact fluorescent lamp is an even shorter and more compact pin-base lamp with triple-turn tubes. It is ideal for miniaturised unconventional luminaires and downlights with shallow mounting depths and for new lighting systems.

- Approx. two thirds the length of an OSRAM DULUX® D of the same wattage.
- Only 20 to 25% of the power consumption of light bulbs of comparable brightness.
- The same rotationally symmetrical luminous intensity distribution as ordinary light bulbs.
- Pleasant warm light, excellent colour rendering.
- Eight times the life of light bulbs of comparable brightness for long relamping intervals.
- Single-ended plug-in base with integrated starter and RF suppression capacitor.



OSRAM DULUX® T/E PLUS for electronic control gear (ECG)



| Product reference | Product number | W | | R _a |
|------------------------------|----------------|----|--------------------|----------------|
| OSRAM DULUX® T/E PLUS | | | | |
| DULUX T/E 13 W/840 PLUS | 4050300446967 | 13 | LUMILUX Cool White | 1 B |
| DULUX T/E 13 W/830 PLUS | 4050300446981 | 13 | LUMILUX Warm White | 1 B |
| DULUX T/E 13 W/827 PLUS | 4050300447001 | 13 | LUMILUX INTERNA | 1 B |
| DULUX T/E 18 W/840 PLUS | 4050300342221 | 18 | LUMILUX Cool White | 1 B |
| DULUX T/E 18 W/830 PLUS | 4050300342245 | 18 | LUMILUX Warm White | 1 B |
| DULUX T/E 18 W/827 PLUS | 4050300342269 | 18 | LUMILUX INTERNA | 1 B |
| DULUX T/E 26 W/840 PLUS | 4050300342283 | 26 | LUMILUX Cool White | 1 B |
| DULUX T/E 26 W/830 PLUS | 4050300342306 | 26 | LUMILUX Warm White | 1 B |
| DULUX T/E 26 W/827 PLUS | 4050300342320 | 26 | LUMILUX INTERNA | 1 B |
| DULUX T/E 32 W/840 PLUS | 4050300348568 | 32 | LUMILUX Cool White | 1 B |
| DULUX T/E 32 W/830 PLUS | 4050300348582 | 32 | LUMILUX Warm White | 1 B |
| DULUX T/E 32 W/827 PLUS | 4050300348605 | 32 | LUMILUX INTERNA | 1 B |
| DULUX T/E 42 W/840 PLUS | 4050300425627 | 42 | LUMILUX Cool White | 1 B |
| DULUX T/E 42 W/830 PLUS | 4050300425641 | 42 | LUMILUX Warm White | 1 B |
| DULUX T/E 42 W/827 PLUS | 4050300425665 | 42 | LUMILUX INTERNA | 1 B |

| Product reference | lm | | l ₁ max. [mm] | l ₂ max. [mm] | IEC h ₁ [mm] | |
|-------------------------|------|---------|--------------------------|--------------------------|-------------------------|----|
| DULUX T/E 13 W/840 PLUS | 900 | GX24q-1 | 90 | 106 | 90 | 10 |
| DULUX T/E 13 W/830 PLUS | 900 | GX24q-1 | 90 | 106 | 90 | 10 |
| DULUX T/E 13 W/827 PLUS | 900 | GX24q-1 | 90 | 106 | 90 | 10 |
| DULUX T/E 18 W/840 PLUS | 1200 | GX24q-2 | 100 | 116 | 110 | 10 |
| DULUX T/E 18 W/830 PLUS | 1200 | GX24q-2 | 100 | 116 | 110 | 10 |
| DULUX T/E 18 W/827 PLUS | 1200 | GX24q-2 | 100 | 116 | 110 | 10 |
| DULUX T/E 26 W/840 PLUS | 1800 | GX24q-3 | 115 | 131 | 130 | 10 |
| DULUX T/E 26 W/830 PLUS | 1800 | GX24q-3 | 115 | 131 | 130 | 10 |
| DULUX T/E 26 W/827 PLUS | 1800 | GX24q-3 | 115 | 131 | 130 | 10 |
| DULUX T/E 32 W/840 PLUS | 2400 | GX24q-3 | 131 | 147 | 145 | 10 |
| DULUX T/E 32 W/830 PLUS | 2400 | GX24q-3 | 131 | 147 | 145 | 10 |
| DULUX T/E 32 W/827 PLUS | 2400 | GX24q-3 | 131 | 147 | 145 | 10 |
| DULUX T/E 42 W/840 PLUS | 3200 | GX24q-4 | 152 | 168 | 155 | 10 |
| DULUX T/E 42 W/830 PLUS | 3200 | GX24q-4 | 152 | 168 | 155 | 10 |
| DULUX T/E 42 W/827 PLUS | 3200 | GX24q-4 | 152 | 168 | 155 | 10 |

For circuit diagrams see page 3.35.

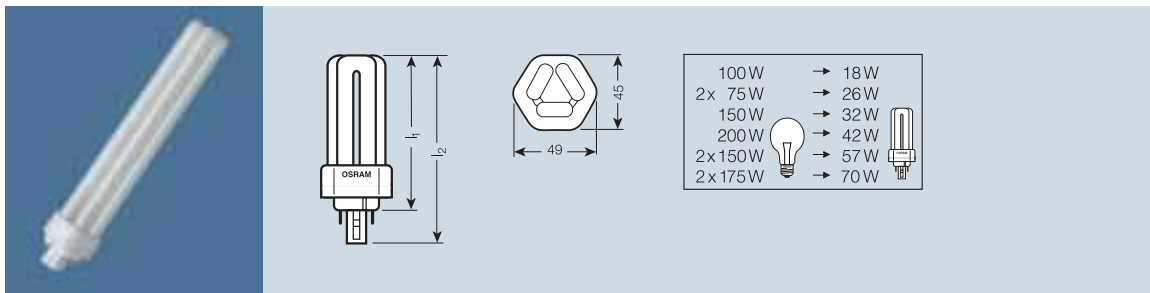
For QUICKTRONIC® electronic control gear see Section 11.

When operated on an ECG, the lamp has ten times the life of a light bulb of the same brightness. OSRAM DULUX® T/E PLUS are compact fluorescent lamps for HF control gear and for dimmer systems. These innovative energy-saving lamps are designed for operation on batteries, solar cells and mains supply. They are suitable for high and low voltage and can be fully dimmed. Their dimensions and wattages are identical to those of the standard OSRAM DULUX® T PLUS models.

- Approx. two thirds the length of an OSRAM DULUX® D/E of the same wattage.
- Luminous flux values from 1200 to 3200 lm.
- The same rotationally symmetrical luminous intensity distribution as ordinary light bulbs.
- Single-ended four-pin plug-in GX24q base with shortened base casing to prevent two-pin lamps being fitted in T/E PLUS holders.

1) See page 3.34.

OSRAM DULUX® T/E IN PLUS for electronic control gear (ECG)



| Product reference | Product number | W | | R _a |
|--|----------------|----|--------------------|----------------|
| OSRAM DULUX® T/E IN PLUS | | | | |
| DULUX T/E 26 W/840 IN PLUS ²⁾ | 4050300425443 | 26 | LUMILUX Cool White | 1 B |
| DULUX T/E 26 W/830 IN PLUS ²⁾ | 4050300425467 | 26 | LUMILUX Warm White | 1 B |
| DULUX T/E 32 W/840 IN PLUS | 4050300425504 | 32 | LUMILUX Cool White | 1 B |
| DULUX T/E 32 W/830 IN PLUS | 4050300425528 | 32 | LUMILUX Warm White | 1 B |
| DULUX T/E 32 W/827 IN PLUS | 4050300425542 | 32 | LUMILUX INTERNA | 1 B |
| DULUX T/E 42 W/840 IN PLUS | 4050300425566 | 42 | LUMILUX Cool White | 1 B |
| DULUX T/E 42 W/830 IN PLUS | 4050300425580 | 42 | LUMILUX Warm White | 1 B |
| DULUX T/E 42 W/827 IN PLUS | 4050300425603 | 42 | LUMILUX INTERNA | 1 B |
| DULUX T/E 57 W/840 IN PLUS | 4050300622675 | 57 | LUMILUX Cool White | 1 B |
| DULUX T/E 57 W/830 IN PLUS | 4050300622699 | 57 | LUMILUX Warm White | 1 B |
| DULUX T/E 70 W/840 IN PLUS | 4050300800394 | 70 | LUMILUX Cool White | 1 B |

| Product reference | lm | ¹⁾ | l ₁ max. [mm] | l ₂ max. [mm] | IEC h [mm] | |
|--|------|---------------|-----------------------------|-----------------------------|---------------|----|
| DULUX T/E 26 W/840 IN PLUS ²⁾ | 1800 | GX24q-3 | 110 | 126 | 130 | 10 |
| DULUX T/E 26 W/830 IN PLUS ²⁾ | 1800 | GX24q-3 | 110 | 126 | 130 | 10 |
| DULUX T/E 32 W/840 IN PLUS | 2400 | GX24q-3 | 126 | 142 | 145 | 10 |
| DULUX T/E 32 W/830 IN PLUS | 2400 | GX24q-3 | 126 | 142 | 145 | 10 |
| DULUX T/E 32 W/827 IN PLUS | 2400 | GX24q-3 | 126 | 142 | 145 | 10 |
| DULUX T/E 42 W/840 IN PLUS | 3200 | GX24q-4 | 147 | 163 | 155 | 10 |
| DULUX T/E 42 W/830 IN PLUS | 3200 | GX24q-4 | 147 | 163 | 155 | 10 |
| DULUX T/E 42 W/827 IN PLUS | 3200 | GX24q-4 | 147 | 163 | 155 | 10 |
| DULUX T/E 57 W/840 IN PLUS | 4300 | GX24q-5 | 179 | 195 | 179 | 10 |
| DULUX T/E 57 W/830 IN PLUS | 4300 | GX24q-5 | 179 | 195 | 179 | 10 |
| DULUX T/E 70 W/840 IN PLUS | 5200 | GX24q-6 | 219 | 235 | 219 | 10 |

For circuit diagrams see page 3.35.

For QUICKTRONIC® electronic control gear see Section 11.

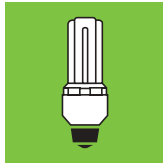
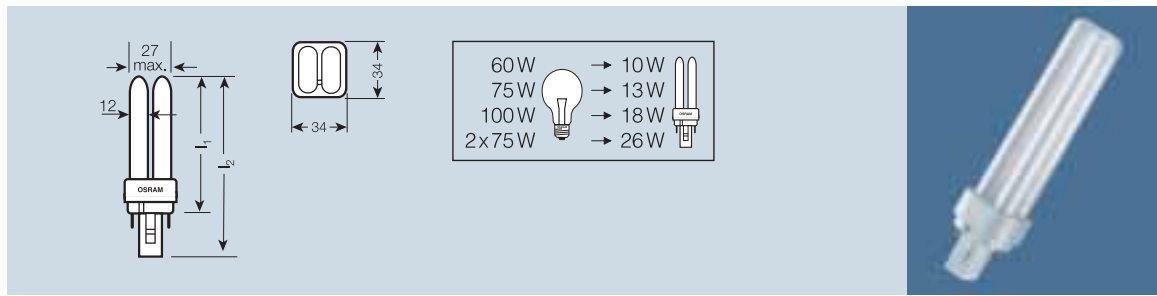
OSRAM DULUX® T/E IN PLUS lamps are OSRAM DULUX® T/E PLUS versions for high ambient temperatures. 90 percent of the luminous flux is achieved at ambient temperatures between 10 and 70 °C. They can be used in almost all burning positions. They can be dimmed with an appropriate ECG.

- Same base as OSRAM DULUX® T/E PLUS.
- All the benefits of OSRAM DULUX® T/E PLUS.





OSRAM DULUX® D for conventional control gear (CCG)



| Product reference | Product number | W | | R _a |
|-----------------------|----------------|----|--------------------|----------------|
| OSRAM DULUX® D | | | | |
| DULUX D 10 W/840 | 4050300010595 | 10 | LUMILUX Cool White | 1 B |
| DULUX D 10 W/830 | 4050300025681 | 10 | LUMILUX Warm White | 1 B |
| DULUX D 10 W/827 | 4050300008110 | 10 | LUMILUX INTERNA | 1 B |
| DULUX D 13 W/840 | 4050300010625 | 13 | LUMILUX Cool White | 1 B |
| DULUX D 13 W/830 | 4050300025698 | 13 | LUMILUX Warm White | 1 B |
| DULUX D 13 W/827 | 4050300008127 | 13 | LUMILUX INTERNA | 1 B |
| DULUX D 18 W/840 | 4050300012056 | 18 | LUMILUX Cool White | 1 B |
| DULUX D 18 W/830 | 4050300025704 | 18 | LUMILUX Warm White | 1 B |
| DULUX D 18 W/827 | 4050300011462 | 18 | LUMILUX INTERNA | 1 B |
| DULUX D 26 W/840 | 4050300012049 | 26 | LUMILUX Cool White | 1 B |
| DULUX D 26 W/830 | 4050300025711 | 26 | LUMILUX Warm White | 1 B |
| DULUX D 26 W/827 | 4050300011912 | 26 | LUMILUX INTERNA | 1 B |

| Product reference | lm | | l ₁ max. [mm] | l ₂ max. [mm] | IEC l ₁ [mm] | |
|-------------------|------|--------|--------------------------|--------------------------|-------------------------|-------|
| DULUX D 10 W/840 | 600 | G24d-1 | 87 | 110 | 95 | 10/50 |
| DULUX D 10 W/830 | 600 | G24d-1 | 87 | 110 | 95 | 10/50 |
| DULUX D 10 W/827 | 600 | G24d-1 | 87 | 110 | 95 | 10/50 |
| DULUX D 13 W/840 | 900 | G24d-1 | 115 | 138 | 130 | 10/50 |
| DULUX D 13 W/830 | 900 | G24d-1 | 115 | 138 | 130 | 10/50 |
| DULUX D 13 W/827 | 900 | G24d-1 | 115 | 138 | 130 | 10/50 |
| DULUX D 18 W/840 | 1200 | G24d-2 | 130 | 153 | 140 | 10/50 |
| DULUX D 18 W/830 | 1200 | G24d-2 | 130 | 153 | 140 | 10/50 |
| DULUX D 18 W/827 | 1200 | G24d-2 | 130 | 153 | 140 | 10/50 |
| DULUX D 26 W/840 | 1800 | G24d-3 | 149 | 172 | 160 | 10/50 |
| DULUX D 26 W/830 | 1800 | G24d-3 | 149 | 172 | 160 | 10/50 |
| DULUX D 26 W/827 | 1800 | G24d-3 | 149 | 172 | 160 | 10/50 |

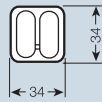
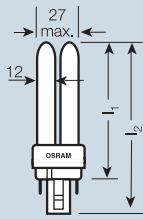
For circuit diagrams 1 and 2 see page 3.35 OSRAM DULUX® D 18 W suitable only for operation with 0.22 A control gear.



This compact fluorescent lamp is ideal for miniature luminaires and downlights for shallow recesses. They have twice the luminous flux and the same length as OSRAM DULUX® S lamps. The lamps consume only 20 to 25% of the power of ordinary light bulbs of comparable brightness. They provide a pleasant warm light and excellent colour rendering.

- No bigger than ordinary light bulbs for shallow luminaires.
- The same rotationally symmetrical luminous intensity distribution as ordinary light bulbs.
- Eight times the life of light bulbs of comparable brightness for long relamping intervals.
- Single-ended plug-in base with integrated starter and RF suppression capacitor.


1) See page 3.34.



OSRAM DULUX® D/E for electronic control gear (ECG) and dimming systems



| | | | |
|--------|---|------|---|
| 60 W | → | 10 W |  |
| 75 W | → | 13 W | |
| 100 W | → | 18 W | |
| 2x75 W | → | 26 W |  |



| Product reference | Product number | W |  | R _a |
|-------------------------|----------------|----|---|----------------|
| OSRAM DULUX® D/E | | | | |
| DULUX D/E 10 W/840 | 4050300017587 | 10 | LUMILUX Cool White | 1 B |
| DULUX D/E 10 W/830 | 4050300419435 | 10 | LUMILUX Warm White | 1 B |
| DULUX D/E 10 W/827 | 4050300012124 | 10 | LUMILUX INTERNA | 1 B |
| DULUX D/E 13 W/840 | 4050300017594 | 13 | LUMILUX Cool White | 1 B |
| DULUX D/E 13 W/830 | 4050300389059 | 13 | LUMILUX Warm White | 1 B |
| DULUX D/E 13 W/827 | 4050300012131 | 13 | LUMILUX INTERNA | 1 B |
| DULUX D/E 18 W/840 | 4050300017617 | 18 | LUMILUX Cool White | 1 B |
| DULUX D/E 18 W/830 | 4050300327211 | 18 | LUMILUX Warm White | 1 B |
| DULUX D/E 18 W/827 | 4050300012148 | 18 | LUMILUX INTERNA | 1 B |
| DULUX D/E 26 W/840 | 4050300020303 | 26 | LUMILUX Cool White | 1 B |
| DULUX D/E 26 W/830 | 4050300327235 | 26 | LUMILUX Warm White | 1 B |
| DULUX D/E 26 W/827 | 4050300012230 | 26 | LUMILUX INTERNA | 1 B |

| Product reference | Im |  ¹⁾ | l ₁ max. [mm] | l ₂ max. [mm] | IEC h [mm] |  |
|--------------------|------|---|--------------------------|--------------------------|------------|---|
| DULUX D/E 10 W/840 | 600 | G24q-1 | 87 | 103 | 95 | 10 |
| DULUX D/E 10 W/830 | 600 | G24q-1 | 87 | 103 | 95 | 10 |
| DULUX D/E 10 W/827 | 600 | G24q-1 | 87 | 103 | 95 | 10 |
| DULUX D/E 13 W/840 | 900 | G24q-1 | 115 | 131 | 130 | 10 |
| DULUX D/E 13 W/830 | 900 | G24q-1 | 115 | 131 | 130 | 10 |
| DULUX D/E 13 W/827 | 900 | G24q-1 | 115 | 131 | 130 | 10 |
| DULUX D/E 18 W/840 | 1200 | G24q-2 | 130 | 146 | 140 | 10 |
| DULUX D/E 18 W/830 | 1200 | G24q-2 | 130 | 146 | 140 | 10 |
| DULUX D/E 18 W/827 | 1200 | G24q-2 | 130 | 146 | 140 | 10 |
| DULUX D/E 26 W/840 | 1800 | G24q-3 | 149 | 165 | 160 | 10 |
| DULUX D/E 26 W/830 | 1800 | G24q-3 | 149 | 165 | 160 | 10 |
| DULUX D/E 26 W/827 | 1800 | G24q-3 | 149 | 165 | 160 | 10 |

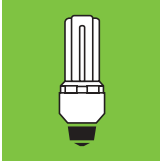
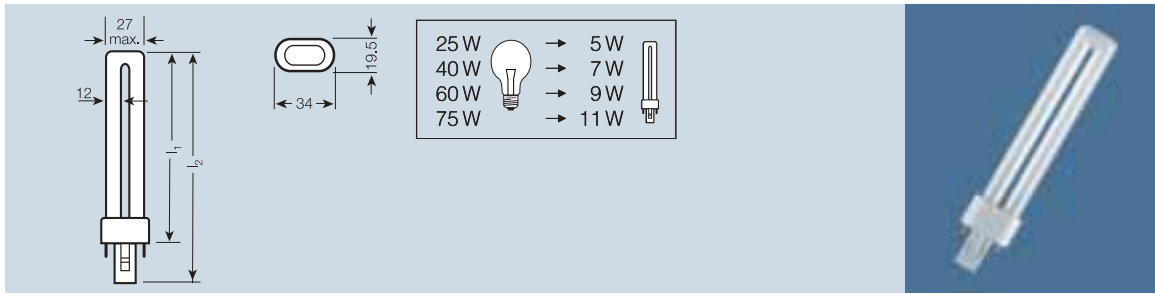
For circuit diagrams see page 3.35.
 For QUICKTRONIC® electronic control gear for high voltages and ACCUTRONIC® for low voltages see Section 11.



These compact fluorescent lamps can be operated on battery, solar or mains power. They are suitable for high and low voltage (e.g. with ACCUTRONIC®). They can also be fully dimmed. Their dimensions and wattages are identical to those of the successful standard OSRAM DULUX® D models. The fact that they can be used with separate control gear means they can be connected to almost any type of power supply, including mains, batteries and solar cells. Major applications include dimming and battery-powered emergency lighting in department stores, office buildings and so on.

- Ten times the life of ordinary light bulbs of the same brightness in ECG operation.
- Comfortable light in ECG operation.
- Shortened base casing to prevent two-pin lamps being fitted in new D/E holders, but still fits in old D/E holders.
- Twice the luminous flux and the same length as OSRAM DULUX® S/E.
- Luminous flux values from 600 to 1800 lm.
- Same dimensions as OSRAM DULUX® D to enable luminaires for emergency lighting systems to conform to a uniform design.
- Single-ended four-pin plug-in G24q base.



OSRAM DULUX® S for conventional control gear (CCG)



| Product reference | Product number | W | | R _a | Im |  | ²⁾ l ₁ max. [mm] | l ₂ max. [mm] | IEC h [mm] |  |
|--------------------------------|----------------|----|--------------------------|----------------|-----|---|--|--------------------------|------------|---|
| OSRAM DULUX® S LUMILUX® | | | | | | | | | | |
| DULUX S 5 W/840 | 4050300010564 | 5 | LUMILUX Cool White | 1 B | 250 | G23 | 85 | 108 | 85 | 10 |
| DULUX S 5 W/830 | 4050300025728 | 5 | LUMILUX Warm White | 1 B | 250 | G23 | 85 | 108 | 85 | 10 |
| DULUX S 5 W/827 | 4050300006130 | 5 | LUMILUX INTERNA | 1 B | 250 | G23 | 85 | 108 | 85 | 10 |
| DULUX S 7 W/865 | 4050300355306 | 7 | LUMILUX Cool Daylight | 1 B | 375 | G23 | 114 | 137 | 115 | 50 |
| DULUX S 7 W/840 | 4050300010571 | 7 | LUMILUX Cool White | 1 B | 400 | G23 | 114 | 137 | 115 | 10 |
| DULUX S 7 W/830 | 4050300025735 | 7 | LUMILUX Warm White | 1 B | 400 | G23 | 114 | 137 | 115 | 10 |
| DULUX S 7 W/827 | 4050300005997 | 7 | LUMILUX INTERNA | 1 B | 400 | G23 | 114 | 137 | 115 | 10 |
| DULUX S 7 W/827 BLI | 4050300006086 | 7 | LUMILUX INTERNA | 1 B | 400 | G23 | 114 | 137 | 115 | 10 ¹⁾ |
| DULUX S 9 W/865 | 4050300355320 | 9 | LUMILUX Cool Daylight | 1 B | 565 | G23 | 144 | 167 | 145 | 50 |
| DULUX S 9 W/840 | 4050300010588 | 9 | LUMILUX Cool White | 1 B | 600 | G23 | 144 | 167 | 145 | 10/50 |
| DULUX S 9 W/830 | 4050300025742 | 9 | LUMILUX Warm White | 1 B | 600 | G23 | 144 | 167 | 145 | 10/50 |
| DULUX S 9 W/827 | 4050300006000 | 9 | LUMILUX INTERNA | 1 B | 600 | G23 | 144 | 167 | 145 | 10/50 |
| DULUX S 9 W/827 BLI | 4050300006093 | 9 | LUMILUX INTERNA | 1 B | 600 | G23 | 144 | 167 | 145 | 10 ¹⁾ |
| DULUX S 11 W/865 | 4050300112374 | 11 | LUMILUX Cool Daylight | 1 B | 850 | G23 | 214 | 237 | 215 | 50 |
| DULUX S 11 W/840 | 4050300010618 | 11 | LUMILUX Cool White | 1 B | 900 | G23 | 214 | 237 | 215 | 10/50 |
| DULUX S 11 W/830 | 4050300025759 | 11 | LUMILUX Warm White | 1 B | 900 | G23 | 214 | 237 | 215 | 10/50 |
| DULUX S 11 W/827 | 4050300006017 | 11 | LUMILUX INTERNA | 1 B | 900 | G23 | 214 | 237 | 215 | 10/50 |
| DULUX S 11 W/827 BLI | 4050300006109 | 11 | LUMILUX INTERNA | 1 B | 900 | G23 | 214 | 237 | 215 | 10 ¹⁾ |
| OSRAM DULUX® S COLOURED | | | | | | | | | | |
| DULUX S 9 W/60 | 4050300015927 | 9 | Red | | 400 | G23 | 144 | 167 | 145 | 10 |
| DULUX S 9 W/66 | 4050300015934 | 9 | Green | | 800 | G23 | 144 | 167 | 145 | 10 |
| DULUX S 9 W/67 | 4050300015941 | 9 | Blue | | 200 | G23 | 144 | 167 | 145 | 10 |

For circuit diagrams 1 to 3 see page 3.35.

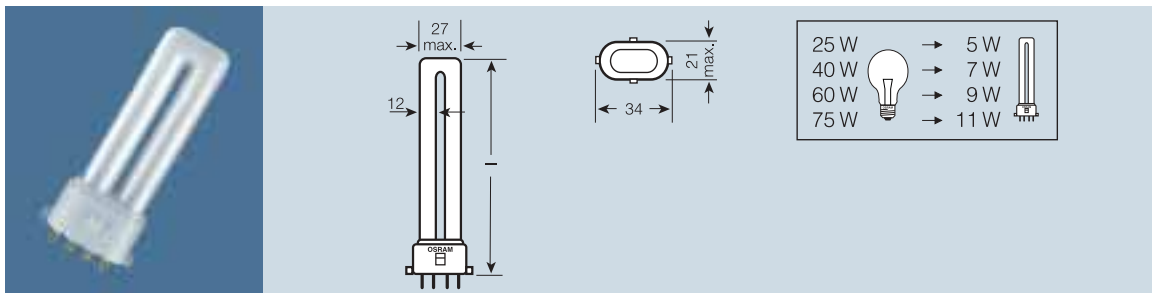


Their small dimensions and slim design make OSRAM DULUX® S lamps ideal for creative lighting.

- Eight times the life and only 1/4 to 1/3 of the power consumption of ordinary light bulbs of comparable brightness.
- Single-ended plug-in base G23 with integrated starter and RF suppression capacitor.
- The coloured version is ideal for creative illumination and decoration.

1) Cardboard blister pack.
2) See page 3.34.

OSRAM DULUX® S/E for electronic control gear (ECG) and dimming systems



Product reference

Product number

W



R_a

l_m



l_{max.}
[mm]

IEC
l_{max.}
[mm]



OSRAM DULUX® S/E LUMILUX

| Product reference | Product number | W | Color | R _a | l _m | Beam spread | l _{max.} [mm] | IEC l _{max.} [mm] | Packaging |
|--------------------|------------------------|----|--------------------|----------------|----------------|-------------|------------------------|----------------------------|-----------|
| DULUX S/E 5 W/840 | 40503000 20150 | 5 | LUMILUX Cool White | 1 B | 250 | 2G7 | 85 | 85 | 10 |
| DULUX S/E 5 W/827 | 40503000 17624 | 5 | LUMILUX INTERNA | 1 B | 250 | 2G7 | 85 | 85 | 10 |
| DULUX S/E 7 W/840 | 40503000 20167 | 7 | LUMILUX Cool White | 1 B | 400 | 2G7 | 114 | 115 | 10 |
| DULUX S/E 7 W/830 | 40503000 591988 | 7 | LUMILUX Warm White | 1 B | 400 | 2G7 | 114 | 115 | 10 |
| DULUX S/E 7 W/827 | 40503000 17648 | 7 | LUMILUX INTERNA | 1 B | 400 | 2G7 | 114 | 115 | 10 |
| DULUX S/E 9 W/840 | 40503000 20174 | 9 | LUMILUX Cool White | 1 B | 600 | 2G7 | 144 | 145 | 10 |
| DULUX S/E 9 W/830 | 40503000 589398 | 9 | LUMILUX Warm White | 1 B | 600 | 2G7 | 144 | 145 | 10 |
| DULUX S/E 9 W/827 | 40503000 17655 | 9 | LUMILUX INTERNA | 1 B | 600 | 2G7 | 144 | 145 | 10 |
| DULUX S/E 11 W/840 | 40503000 20181 | 11 | LUMILUX Cool White | 1 B | 900 | 2G7 | 214 | 215 | 10 |
| DULUX S/E 11 W/830 | 40503000 589374 | 11 | LUMILUX Warm White | 1 B | 900 | 2G7 | 214 | 215 | 10 |
| DULUX S/E 11 W/827 | 40503000 17662 | 11 | LUMILUX INTERNA | 1 B | 900 | 2G7 | 214 | 215 | 10 |

For circuit diagrams see page 3.35.

For QUICKTRONIC® electronic control gear for high voltages and ACCUTRONIC® for low voltages see Section 11.

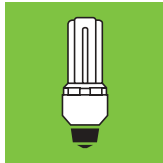
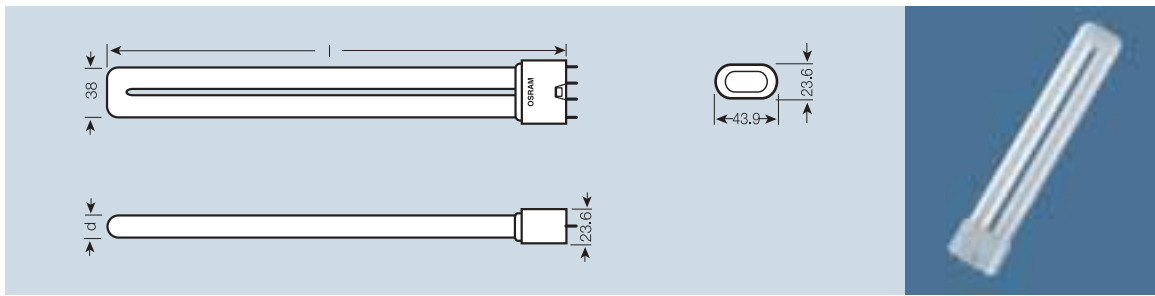


OSRAM DULUX® S/E compact fluorescent lamps can be operated on almost any type of power supply, which makes them extremely versatile.

These innovative energy-saving lamps can be operated on battery, solar or mains power. They are suitable for high and low voltage (e.g. with ACCUTRONIC®). They can also be fully dimmed. Their dimensions and wattages are identical to those of the successful standard OSRAM DULUX® S models.

- Ten times the life of ordinary light bulbs of the same light output, with ECG operation.
- Comfortable light in ECG operation.
- Small dimensions, extremely slim.
- Smallest lamp suitable for solar or battery-powered systems (emergency power).
- Low power consumption (5 W, 7 W, 9 W, 11 W).
- Luminous flux values from 250 to 900 lm.
- Single-ended four-pin plug-in 2G7 base.





| Product reference | Product number | W | | Ra | Im | | ²⁾ l max. (mm) | IEC l max. (mm) | TUBE d (mm) | |
|--------------------------------|----------------|----|--------------------------|-----|------|------|---------------------------|-----------------|-------------|----|
| OSRAM DULUX® L LUMILUX® | | | | | | | | | | |
| DULUX L 18 W/840 | 4050300010724 | 18 | LUMILUX Cool White | 1 B | 1200 | 2G11 | 217 | 225 | 17.5 | 10 |
| DULUX L 18 W/830 | 4050300010731 | 18 | LUMILUX Warm White | 1 B | 1200 | 2G11 | 217 | 225 | 17.5 | 10 |
| DULUX L 18 W/827 | 4050300010748 | 18 | LUMILUX INTERNA | 1 B | 1200 | 2G11 | 217 | 225 | 17.5 | 10 |
| DULUX L 24 W/840 | 4050300010755 | 24 | LUMILUX Cool White | 1 B | 1800 | 2G11 | 317 | 320 | 17.5 | 10 |
| DULUX L 24 W/830 | 4050300010762 | 24 | LUMILUX Warm White | 1 B | 1800 | 2G11 | 317 | 320 | 17.5 | 10 |
| DULUX L 24 W/827 | 4050300010779 | 24 | LUMILUX INTERNA | 1 B | 1800 | 2G11 | 317 | 320 | 17.5 | 10 |
| DULUX L 36 W/865 | 4050300328263 | 36 | LUMILUX Cool Daylight | 1 B | 2750 | 2G11 | 411 | 415 | 17.5 | 10 |
| DULUX L 36 W/840 | 4050300010786 | 36 | LUMILUX Cool White | 1 B | 2900 | 2G11 | 411 | 415 | 17.5 | 10 |
| DULUX L 36 W/830 | 4050300010793 | 36 | LUMILUX Warm White | 1 B | 2900 | 2G11 | 411 | 415 | 17.5 | 10 |
| DULUX L 36 W/827 | 4050300010809 | 36 | LUMILUX INTERNA | 1 B | 2900 | 2G11 | 411 | 415 | 17.5 | 10 |
| DULUX L 40 W/865 ¹⁾ | 4050300592008 | 40 | LUMILUX Cool Daylight | 1 B | 3325 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 40 W/840 ¹⁾ | 4050300279909 | 40 | LUMILUX Cool White | 1 B | 3500 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 40 W/830 ¹⁾ | 4050300298894 | 40 | LUMILUX Warm White | 1 B | 3500 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 40 W/827 ¹⁾ | 4050300322285 | 40 | LUMILUX INTERNA | 1 B | 3500 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 55 W/865 ¹⁾ | 4050300553900 | 55 | LUMILUX Cool Daylight | 1 B | 4550 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 55 W/840 ¹⁾ | 4050300295879 | 55 | LUMILUX Cool White | 1 B | 4800 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 55 W/830 ¹⁾ | 4050300298917 | 55 | LUMILUX Warm White | 1 B | 4800 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 55 W/827 ¹⁾ | 4050300315881 | 55 | LUMILUX INTERNA | 1 B | 4800 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 80 W/840 ¹⁾ | 4050300665481 | 80 | LUMILUX Cool White | 1 B | 6000 | 2G11 | 568 | 568 | 17.5 | 10 |
| DULUX L 80 W/830 ¹⁾ | 4050300665467 | 80 | LUMILUX Warm White | 1 B | 6000 | 2G11 | 568 | 568 | 17.5 | 10 |
| OSRAM DULUX® L COLOURED | | | | | | | | | | |
| DULUX L 24 W/67 | 4050300354033 | 24 | Blue | | 550 | 2G11 | 317 | 320 | 17.5 | 50 |

For circuit diagrams with conventional control gear see page 3.35.
For QUICKTRONIC® electronic control gear see Section 11.

OSRAM DULUX® L provide lighting planners with interesting options. Their pleasant and economical light can be used in unconventional ways for all indoor and outdoor lighting – ideal for new short-run luminaires.

- Same luminous flux and power consumption as fluorescent tubes but less than half the length and more compact than U-shaped and circular lamps.
- Available in popular light colours LUMILUX® and LUMILUX® DE LUXE.
- Can be combined with existing LUMILUX® lighting because the same range of light colours is available.

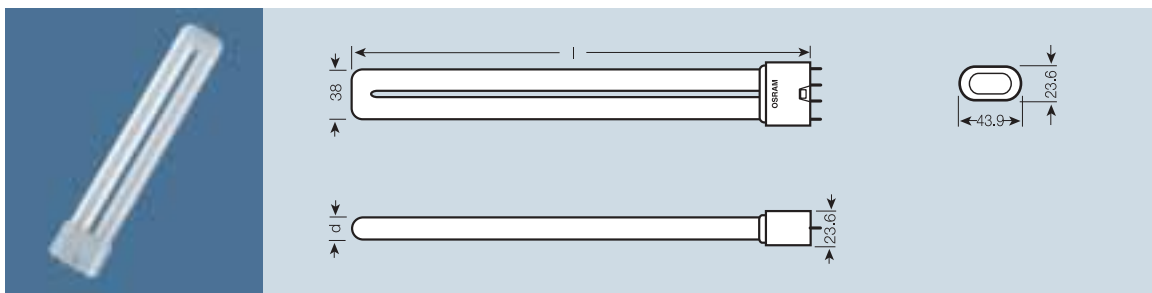
- Suitable for use with conventional control gear and starters (except for OSRAM DULUX® L 40 W, 55 W and 80 W) and for QUICKTRONIC® HF control gear (see Section 11).
- Single-ended four-pin plug-in 2G11 base.
- OSRAM DULUX® L 40 W, L 55 W and L 80 W have been designed specifically for square and short-run luminaires with 600 mm sides.
- Comfortable light thanks to ECG operation.
- The coloured version is the ideal energy-saving lamp for illumination and decoration.

Applications:

Rectangular, square and round ceiling and wall luminaires for foyers, offices, shops and exhibitions.

1) For ECG operation only.
2) See page 3.34.

OSRAM DULUX® L CONSTANT



| Product reference | Product number | W | | Ra |
|--------------------------------|----------------|----|--------------------|-----|
| OSRAM DULUX® L CONSTANT | | | | |
| DULUX L CONSTANT 40 W | 4008321104823 | 40 | LUMILUX Cool White | 1 B |
| DULUX L CONSTANT 55 W | 4008321104847 | 55 | LUMILUX Cool White | 1 B |
| DULUX L CONSTANT 80 W | 4008321104861 | 80 | LUMILUX Cool White | 1 B |

| Product reference | lm | | I max. [mm] | IEC I max. [mm] | TUBE d [mm] | |
|-----------------------|------|--------------------|-------------|-----------------|-------------|----|
| DULUX L CONSTANT 40 W | 3500 | 2G11 ¹⁾ | 533 | 535 | 17.5 | 10 |
| DULUX L CONSTANT 55 W | 4800 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L CONSTANT 80 W | 6000 | 2G11 | 565 | 568 | 17.5 | 10 |

OSRAM DULUX® L CONSTANT uses new high-temperature amalgam technology. This enables the lamps to operate with a luminous flux greater than 90% in a temperature range from +5 °C to +70 °C. This compares favourably with conventional OSRAM DULUX® L lamps (> 90% between +20 °C and +40 °C). Provision information on dimming: OSRAM DULUX® L CONSTANT lamps have not yet been approved for dimming.

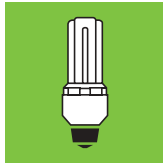
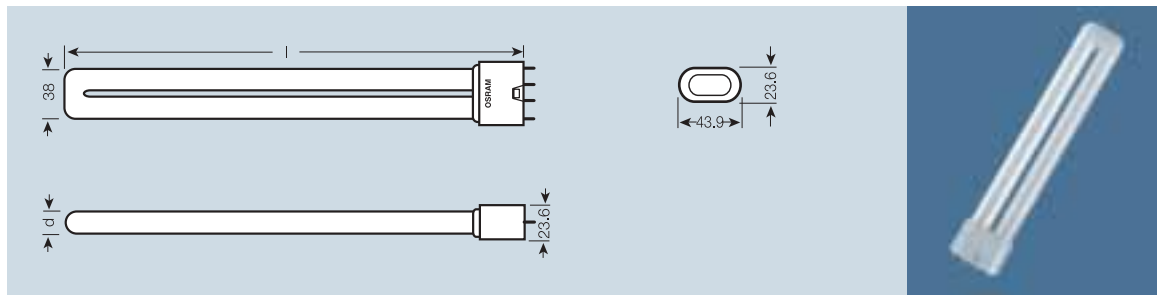
- Optimised amalgam technology.
- the lamp has the same base as conventional OSRAM DULUX L lamps.
- The lamp is identified by a red stamp.

Applications:



- Outdoor lighting
- Indoor lighting
- Industrial lighting
- Narrow luminaires with high temperatures
- Studio lighting



Photo: ZUMTOBEL STAFF.



| Product reference | Product number | W | | R _a |
|--|----------------|----|----------------------------|----------------|
| OSRAM DULUX® L LUMILUX® DE LUXE | | | | |
| DULUX L 18 W/954 | 4050300018423 | 18 | LUMILUX DE LUXE Daylight | 1 A |
| DULUX L 18 W/940 | 4050300018560 | 18 | LUMILUX DE LUXE Cool White | 1 A |
| DULUX L 18 W/930 | 4050300018324 | 18 | LUMILUX DE LUXE Warm White | 1 A |
| DULUX L 24 W/954 | 4050300018447 | 24 | LUMILUX DE LUXE Daylight | 1 A |
| DULUX L 24 W/940 | 4050300018584 | 24 | LUMILUX DE LUXE Cool White | 1 A |
| DULUX L 24 W/930 | 4050300018386 | 24 | LUMILUX DE LUXE Warm White | 1 A |
| DULUX L 36 W/954 | 4050300018461 | 36 | LUMILUX DE LUXE Daylight | 1 A |
| DULUX L 36 W/940 | 4050300018607 | 36 | LUMILUX DE LUXE Cool White | 1 A |
| DULUX L 36 W/930 | 4050300018393 | 36 | LUMILUX DE LUXE Warm White | 1 A |
| DULUX L 40 W/954 ¹⁾ | 4050300315799 | 40 | LUMILUX DE LUXE Daylight | 1 A |
| DULUX L 55 W/954 ¹⁾ | 4050300321400 | 55 | LUMILUX DE LUXE Daylight | 1 A |
| DULUX L 55 W/940 ¹⁾ | 4050300197999 | 55 | LUMILUX DE LUXE Cool White | 1 A |
| DULUX L 55 W/930 ¹⁾ | 4050300370705 | 55 | LUMILUX DE LUXE Warm White | 1 A |

| Product reference | lm |  | l_{max} [mm] | IEC l_{max} [mm] | TUBE d [mm] |  |
|--------------------------------|------|---|----------------|--------------------|-------------|---|
| DULUX L 18 W/954 | 750 | 2G11 | 217 | 225 | 17.5 | 10 |
| DULUX L 18 W/940 | 750 | 2G11 | 217 | 225 | 17.5 | 10 |
| DULUX L 18 W/930 | 750 | 2G11 | 217 | 225 | 17.5 | 10 |
| DULUX L 24 W/954 | 1200 | 2G11 | 317 | 320 | 17.5 | 10 |
| DULUX L 24 W/940 | 1200 | 2G11 | 317 | 320 | 17.5 | 10 |
| DULUX L 24 W/930 | 1200 | 2G11 | 317 | 320 | 17.5 | 10 |
| DULUX L 36 W/954 | 1900 | 2G11 | 411 | 415 | 17.5 | 10 |
| DULUX L 36 W/940 | 1900 | 2G11 | 411 | 415 | 17.5 | 10 |
| DULUX L 36 W/930 | 1900 | 2G11 | 411 | 415 | 17.5 | 10 |
| DULUX L 40 W/954 ¹⁾ | 2200 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 55 W/954 ¹⁾ | 3000 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 55 W/940 ¹⁾ | 3000 | 2G11 | 533 | 535 | 17.5 | 10 |
| DULUX L 55 W/930 ¹⁾ | 3000 | 2G11 | 533 | 535 | 17.5 | 10 |

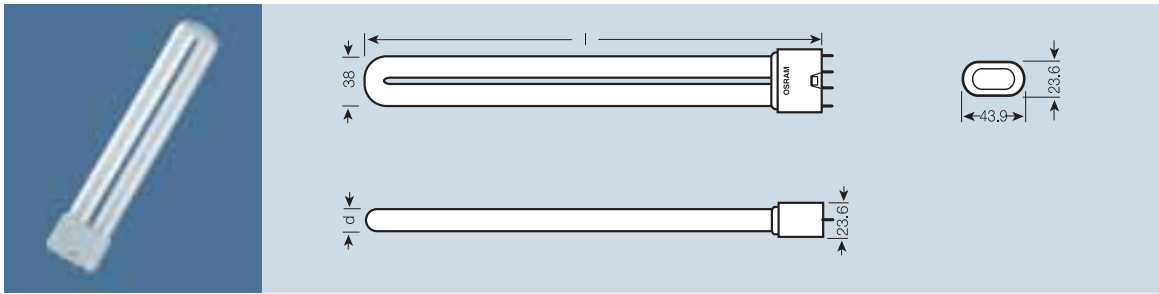
For circuit diagrams with conventional control gear see page 3.35.
 For QUICKTRONIC® electronic control gear see Section 11.

OSRAM DULUX® L compact fluorescent lamps are ideal for new short-run luminaires.

The excellent colour rendering of OSRAM DULUX® L LUMILUX® DE LUXE lamps opens up areas of application in which colour rendering is of major importance.

1) For ECG operation only.
 2) See page 3.34.

OSRAM DULUX® L SP



| Product reference | Product number | W | | Ra | Im | | l max. [mm] | TUBE d [mm] | |
|--------------------------|----------------|----|------------------------|------|------|-----|-------------|-------------|--|
| OSRAM DULUX® L SP | | | | | | | | | |
| DULUX L 18 W/830 SP | 4050300300276 | 18 | LUMILUX Warm White 1 B | 1200 | 2G11 | 209 | 17.5 | 10 | |
| DULUX L 24 W/830 SP | 4050300300238 | 24 | LUMILUX Warm White 1 B | 1800 | 2G11 | 309 | 17.5 | 10 | |

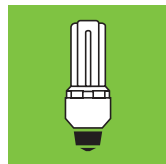
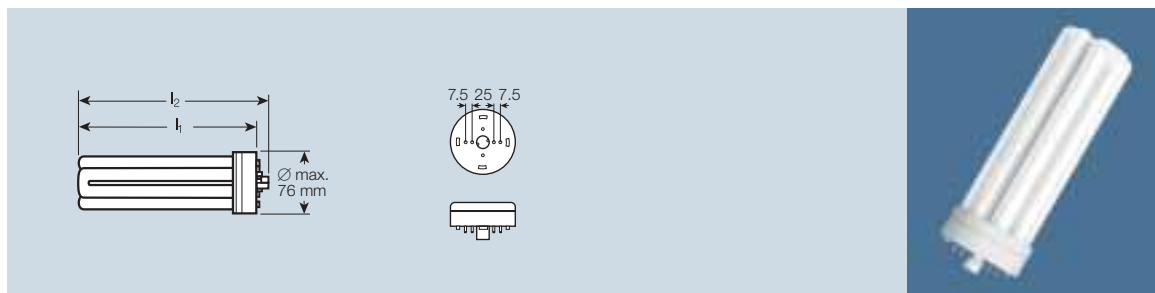
For circuit diagrams with conventional control gear see page 3.35.
For QUICKTRONIC® electronic control gear see Section 11.

OSRAM DULUX® L SP lamps bring the same economy and luminous flux to outdoor lighting that OSRAM DULUX® L lamps bring to indoor lighting.

The round-ended design ensures that maximum luminous flux is achieved at an average outdoor temperature of 5 °C.



OSRAM DULUX® L SP lamps have been specially developed for outdoor lighting.



| Product reference | Product number | W | | R _a |
|---------------------------------------|----------------|-----|------------|----------------|
| OSRAM DULUX® 120 W HO CONSTANT | | | | |
| DULUX 120 W HO CONSTANT | 4008321053008 | 120 | Warm White | 1 B |
| DULUX 120 W HO CONSTANT | 4008321053022 | 120 | Cool White | 1 B |

| Product reference | lm | ¹⁾ | l ₁ max. [mm] | l ₂ max. [mm] | IEC l ₁ [mm] | |
|-------------------------|------|---------------|--------------------------|--------------------------|-------------------------|---|
| DULUX 120 W HO CONSTANT | 9000 | 2G8-1 | 215 | 230 | 225 | 6 |
| DULUX 120 W HO CONSTANT | 9000 | 2G8-1 | 215 | 230 | 225 | 6 |

The innovative OSRAM DULUX® 120 W HO (High Output) CONSTANT compact fluorescent lamp offers a high luminous flux of 9000 lm. Thanks to new amalgam technology, high luminous flux is provided over a wide range of ambient temperatures. 90% is achieved between +5 °C and +70 °C.

- Good colour rendering (R_a > 80) and colour stability throughout the life of the lamp
- This lamp has not yet been approved for dimming
- Instant hot restart after a power outage
- Thanks to its quadruple-turn tubes, this lamp is the shortest in this segment
- New: specially developed four-pin base (2G8)

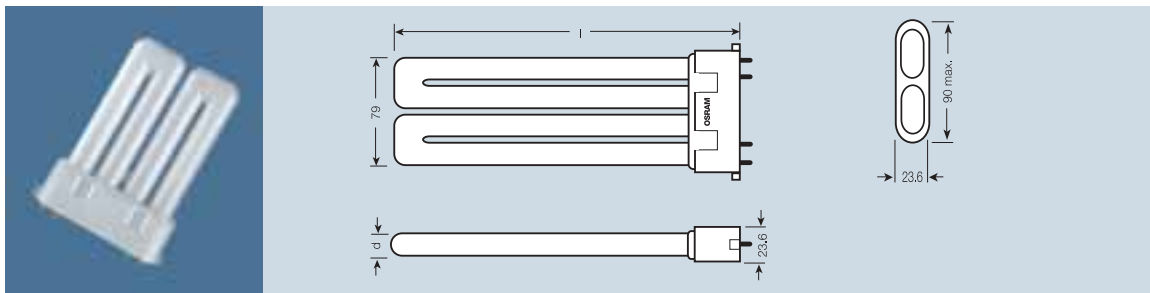
OSRAM DULUX® 120 W HO CONSTANT is the first choice for new high-intensity downlights, ceiling lights and workplace lighting in industry and commerce. Ideal areas of application include public buildings, shopping centres, warehouses, car parks, sports halls and outdoor lighting.



Bright, durable and economical – the new success model for demanding users.

Picture source: Spittler Lichttechnik GmbH, Goslar

1) See page 3.34.



| Product reference | Product number | W | | Ra | Im | | l max. (mm) | IEC l max. (mm) | TUBE d (mm) | |
|-----------------------|----------------|----|--------------------|-----|------|------|-------------|-----------------|-------------|----|
| OSRAM DULUX® F | | | | | | | | | | |
| DULUX F 18 W/840 | 4050300333526 | 18 | LUMILUX Cool White | 1 B | 1100 | 2G10 | 122 | 122 | 17.5 | 10 |
| DULUX F 18 W/830 | 4050300333540 | 18 | LUMILUX Warm White | 1 B | 1100 | 2G10 | 122 | 122 | 17.5 | 10 |
| DULUX F 18 W/827 | 4050300333564 | 18 | LUMILUX INTERNA | 1 B | 1100 | 2G10 | 122 | 122 | 17.5 | 10 |
| DULUX F 24 W/840 | 4050300333588 | 24 | LUMILUX Cool White | 1 B | 1700 | 2G10 | 165 | 165 | 17.5 | 10 |
| DULUX F 24 W/830 | 4050300333601 | 24 | LUMILUX Warm White | 1 B | 1700 | 2G10 | 165 | 165 | 17.5 | 10 |
| DULUX F 24 W/827 | 4050300333625 | 24 | LUMILUX INTERNA | 1 B | 1700 | 2G10 | 165 | 165 | 17.5 | 10 |
| DULUX F 36 W/840 | 4050300299037 | 36 | LUMILUX Cool White | 1 B | 2800 | 2G10 | 217 | 217 | 17.5 | 10 |
| DULUX F 36 W/830 | 4050300299051 | 36 | LUMILUX Warm White | 1 B | 2800 | 2G10 | 217 | 217 | 17.5 | 10 |
| DULUX F 36 W/827 | 4050300312187 | 36 | LUMILUX INTERNA | 1 B | 2800 | 2G10 | 217 | 217 | 17.5 | 10 |

For circuit diagrams with conventional control gear see page 3.35.

For QUICKTRONIC® electronic control gear see Section 11.

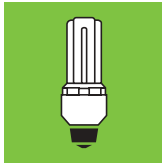
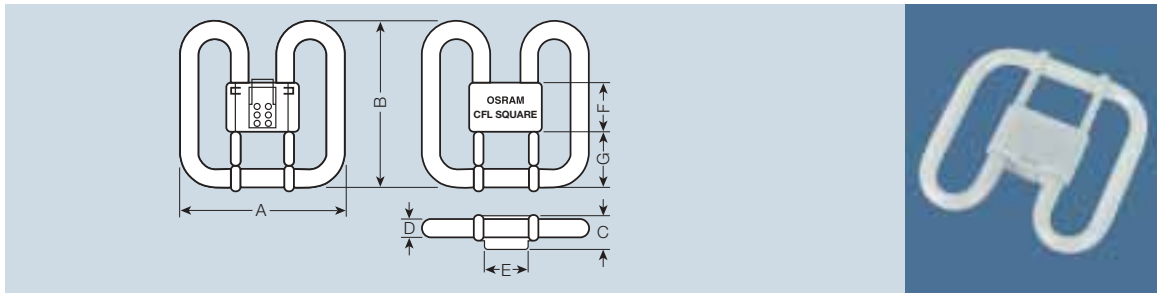


An interesting example of OSRAM DULUX® F lamps in vertical downlights.

OSRAM DULUX® F lamps are new low-profile compact fluorescent lamps with high luminous efficacy. They are ideal for area lighting with 2 M and 3 M modular luminaires (200 and 300 mm sides), e.g. for square surface-mounted and recessed luminaires, low-profile wall and ceiling luminaires, downlights and uplights.

- High luminous efficacy: with QUICKTRONIC® the OSRAM DULUX® F 36 W has a 13% higher luminous flux than two OSRAM DULUX® L 18 W lamps.
- Compact dimensions: only about half as long as an OSRAM DULUX® L of comparable output.
- The OSRAM DULUX® F 36 W is easier to install and involves lower system costs than two OSRAM DULUX® L 18 W lamps.
- Can be used with the same HF control gear or conventional control gear as OSRAM DULUX® L lamps of comparable output.
- Four-pin plug-in 2G10 base.

OSRAM CFL SQUARE® for conventional control gear (CCG)



| Product reference | Product number | W | | R _a | Im | | |
|---------------------------|----------------|----|--------------------|----------------|------|-------|--------|
| OSRAM CFL SQUARE® | | | | | | | |
| CFL SQUARE 16 W/827 2-Pin | 4050300816852 | 16 | LUMILUX INTERNA | 1B | 1050 | GR8 | 138 20 |
| CFL SQUARE 16 W/835 2-Pin | 4050300816838 | 16 | LUMILUX Warm White | 1B | 1050 | GR8 | 138 20 |
| CFL SQUARE 28 W/827 2-Pin | 4050300816913 | 28 | LUMILUX INTERNA | 1B | 2050 | GR8 | 205 20 |
| CFL SQUARE 28 W/835 2-Pin | 4050300816937 | 28 | LUMILUX Warm White | 1B | 2050 | GR8 | 205 20 |
| CFL SQUARE 16 W/827 4-Pin | 4050300816890 | 16 | LUMILUX INTERNA | 1B | 1050 | GR10q | 138 20 |
| CFL SQUARE 16 W/835 4-Pin | 4050300816876 | 16 | LUMILUX Warm White | 1B | 1050 | GR10q | 138 20 |
| CFL SQUARE 28 W/827 4-Pin | 4050300816951 | 28 | LUMILUX INTERNA | 1B | 2050 | GR10q | 205 20 |
| CFL SQUARE 28 W/835 4-Pin | 4050300816982 | 28 | LUMILUX Warm White | 1B | 2050 | GR10q | 205 20 |
| CFL SQUARE 38 W/827 4-Pin | 4050300817002 | 38 | LUMILUX INTERNA | 1B | 2700 | GR10q | 205 20 |
| CFL SQUARE 38 W/835 4-Pin | 4050300817026 | 38 | LUMILUX Warm White | 1B | 2700 | GR10q | 205 20 |

OSRAM CFL SQUARE® lamps are slim compact fluorescent lamps. The square shape provides uniform distribution of light, with no shadows at either end and no dark patches. The lamps are ideal for low-profile wall and ceiling luminaires.

- Luminous flux values from 1050 to 2700 lm.
- Available in 3 wattages: 16 W, 28 W and 38 W.
- Available in 2 light colours: 827 and 835.
- Available in 2-pin and 4-pin versions.

Applications:

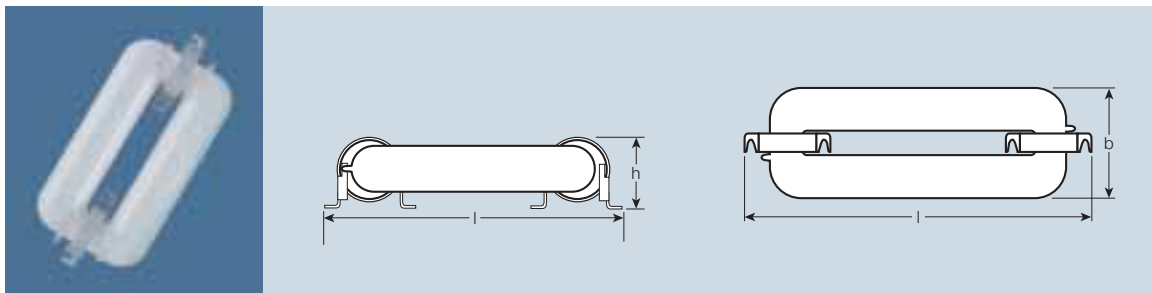
Public buildings, reception areas, office lighting, corridors, etc.

| Product reference | A in mm | B in mm | C in mm | D in mm | E in mm | F in mm | G in mm |
|-------------------|------------|------------|-----------|-----------|-----------|-----------|-----------|
| CFL SQUARE 16 W | max. 138.0 | max. 141.0 | max. 27.5 | max. 15.0 | max. 41.0 | max. 40.0 | 49.0/51.0 |
| CFL SQUARE 28 W | max. 205.0 | max. 207.0 | max. 33.0 | max. 24.0 | max. 41.0 | max. 49.0 | 74.0/77.0 |
| CFL SQUARE 38 W | max. 205.0 | max. 207.0 | max. 33.0 | max. 24.0 | max. 41.0 | max. 49.0 | 74.0/77.0 |

1) See page 3.34.

OSRAM ENDURA®

The electrode-less high-performance fluorescent lamp



Product reference Product number W Ra Im I max. [mm] d max. [mm] h max. [mm]

ENDURA®

Electrode-less high-performance fluorescent lamp

| | | | | | | | | | |
|--------------------------------------|---------------|-----|--------------------|------|---------------------|-----|-----|----|---|
| ENDURA 70 W/830 2-pin ³⁾ | 4050300817293 | 70 | LUMILUX Warm White | ≥ 80 | 6500 ¹⁾ | 315 | 139 | 75 | 1 |
| ENDURA 70 W/840 2-pin ³⁾ | 4050300817286 | 70 | LUMILUX Cool White | ≥ 80 | 6500 ¹⁾ | 315 | 139 | 75 | 1 |
| ENDURA 100 W/830 2-pin ³⁾ | 4050300668420 | 100 | LUMILUX Warm White | ≥ 80 | 8000 ¹⁾ | 315 | 139 | 75 | 1 |
| ENDURA 100 W/840 2-pin ³⁾ | 4050300668437 | 100 | LUMILUX Cool White | ≥ 80 | 8000 ¹⁾ | 315 | 139 | 75 | 1 |
| ENDURA 150 W/830 2-pin ³⁾ | 4050300668444 | 150 | LUMILUX Warm White | ≥ 80 | 12000 ²⁾ | 415 | 139 | 75 | 1 |
| ENDURA 150 W/840 2-pin ³⁾ | 4050300668451 | 150 | LUMILUX Cool White | ≥ 80 | 12000 ²⁾ | 415 | 139 | 75 | 1 |

For QUICKTRONIC® ENDURA® electronic control gear see Section 11.

The principle of the OSRAM ENDURA®

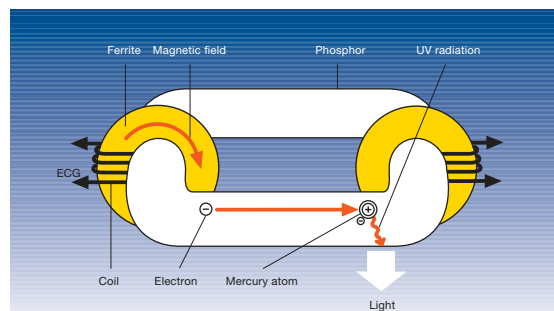
The discharge in this lamp has no starting point and no end. The closed “ring” enables a discharge to take place without electrodes. In the ENDURA® lamps the energy is “injected” from the outside by magnetic fields, which leads to an extremely long service life.

Product features:

- Extremely long life
- High luminous flux
- Instant flicker-free starting
- High system luminous efficacy: 80 lm/W
- Excellent quality of light (colour rendering $R_a \geq 80$)
- High luminous flux over a wide temperature range thanks to amalgam technology
- Low operating frequency of 250 kHz
- Small loss of luminous flux
- Low ignition temperature, as low as $-40\text{ }^\circ\text{C}^4$
- Can be used in dc systems

Preferred applications:

Wherever relamping is expensive, for example in outdoor lighting, tunnel lighting and factory lighting.



The ENDURA® electrode-less high-performance fluorescent lamp has an extremely long life.



Perfect for factory lighting: the long life of the lamps means extremely long relamping intervals.



Ideal for tunnel lighting: bright flicker-free light for a safe journey.

| Lamp OSRAM DULUX® Wattage | Lamp voltage | | Lamp current | | System wattage, ECG operation W | Luminance cd/cm ² LF 827, 830, 840 | Compensation Parallel capacitor ¹⁾ CCG operation 230V/50Hz µF | Series capaci- tor ²⁾ CCG opera- tion µF |
|---------------------------------|---------------------|-----------------------------|----------------------|------------------------------|---|--|--|---|
| | for 50/60Hz V | for HF operation V | for 50/60Hz mA | for HF operation mA | | | | |
| CFL SQUARE 16 | 103 | — | 195 | — | — | — | — | — |
| CFL SQUARE 28 | 108 | — | 320 | — | — | — | — | — |
| CFL SQUARE 38 | 110 | — | 430 | — | — | — | — | — |
| DULUX S 5 | 35 | — | 180 | — | — | 2.5 | 2.2 | — |
| DULUX S 7 | 47/45 | — | 175/180 | — | — | 2.6 | 2.1 | — |
| DULUX S 9 | 60/59 | — | 170/180 | — | — | 2.8 | 2.0 | — |
| DULUX S 11 | 91/— | — | 155/— | — | — | 2.7 | 1.7 | — |
| DULUX D 10 | 64 | — | 190 | — | — | 4.0 | 2.2 | 1.4 |
| DULUX D 13 | 91 | — | 175 | — | — | 4.0 | 1.8 | 1.4 |
| DULUX D 18 | 100 | — | 220 | — | — | 4.5 | 2.2 | 1.7 |
| DULUX D 26 | 105 | — | 325 | — | — | 5.5 | 3.2 | 2.5 |
| DULUX T 13 | 91 | — | 175 | — | — | 4.2 | 1.8 | 1.4 |
| DULUX T 18 | 100 | — | 225 | — | — | 4.7 | 2.3 | 1.7 |
| DULUX T 26 | 105 | — | 325 | — | — | 6.0 | 3.3 | 2.5 |
| DULUX S/E 5 | — | 27 | — | 190 | 7.5 | 2.5 | — | — |
| DULUX S/E 7 | — | 37 | — | 175 | 9 | 2.6 | — | — |
| DULUX S/E 9 | — | 48 | — | 170 | 12 | 2.8 | — | — |
| DULUX S/E 11 | — | 75 | — | 150 | 14 | 2.7 | — | — |
| DULUX D/E 10 | — | 51 | — | 190 | 12 | 4.0 | — | — |
| DULUX D/E 13 | — | 77 | — | 165 | 14 | 4.0 | — | — |
| DULUX D/E 18 | — | 80 | — | 210 | 20 | 4.5 | — | — |
| DULUX D/E 26 | — | 80 | — | 300 | 28 | 5.5 | — | — |
| DULUX T/E 13 | — | 77 | — | 165 | 14 | 4.2 | — | — |
| DULUX T/E 18 | — | 80 | — | 210 | 20 | 4.7 | — | — |
| DULUX T/E 26 | — | 80 | — | 300 | 28 | 6.0 | — | — |
| DULUX T/E 32 | — | 100 | — | 320 | 35 | 6.5 | — | — |
| DULUX T/E 42 | — | 135 | — | 320 | 46 | 7.0 | — | — |
| DULUX T/E 57 | — | 182 | — | 320 | 62 | 7.0 | — | — |
| DULUX T/E 70 | — | 219 | — | 320 | 77 | 7.0 | — | — |
| DULUX L 18 | 58 | 50 | 375 | 320 | 19 | 2.1 | 4.2 | 2.7 |
| DULUX L 24 | 87 | 75 | 345 | 300 | 27 | 2.1 | 3.6 | 2.7 |
| DULUX L 36 | 106 | 90 | 435 | 360 | 39 | 2.8 | 4.4 | 3.4 |
| DULUX L 40 | — | 126 | — | 320 | 45 | 2.3 | — | — |
| DULUX L 55 | — | 101 | — | 550 | 61 | 3.2 | — | — |
| DULUX L 80 | — | 145 | — | 555 | 86 | 3.7 | — | — |
| DULUX L CONSTANT 40 | — | 126 | — | 320 | 45 | 2.3 | — | — |
| DULUX L CONSTANT 55 | — | 101 | — | 550 | 61 | 3.2 | — | — |
| DULUX L CONSTANT 80 | — | 145 | — | 555 | 86 | 3.7 | — | — |
| DULUX 120 W HO CONSTANT | — | 153 | — | 800 | 134 | 7 | — | — |
| DULUX F 18 | 58 | 50 | 375 | 320 | 19 | 2.4 | 4.2 | 2.7 |
| DULUX F 24 | 87 | 75 | 345 | 300 | 27 | 2.5 | 3.6 | 2.7 |
| DULUX F 36 | 106 | 90 | 435 | 360 | 39 | 3.0 | 4.4 | 3.4 |

* ECG also available in two-lamp version.

For QUICKTRONIC® electronic control gear see Section 11.

For detailed technical information see the "Technical Guides".

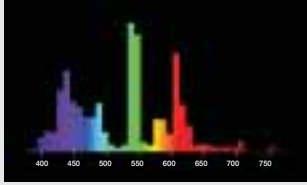


1) Design for cos phi = 0.95
Dielectric strength of the capacitors 250 V ac
Capacitance tolerance ± 10%.

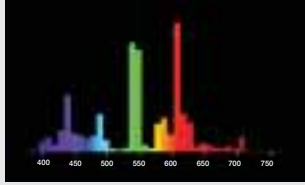
2) To maintain the specified operating and preheating values,
close-tolerance capacitors (± 2%) and series reactors
(± 1.5%) are required for series compensation.
Check the product ranges of leading manufacturers.
Dielectric strength of the capacitors 450 V ac.

Spectral power distribution of OSRAM DULUX® lamps with integrated control gear

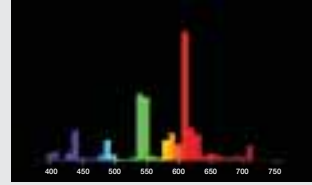
Visible range from 380 to 780 nm, relative spectral emission per 10 nm.



Colour 860 LUMILUX®
Daylight



Colour 840 LUMILUX®
Cool White

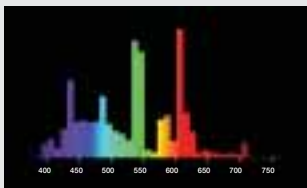


Colour 827 LUMILUX®
Warm White

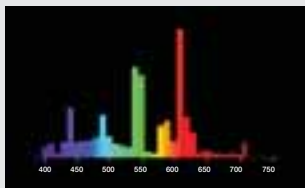


Spectral power distribution of OSRAM DULUX® pin-base lamps

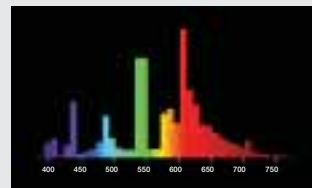
Visible range from 380 to 780 nm, relative spectral emission per 10 nm.



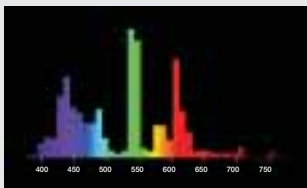
Colour 954 LUMILUX® DE LUXE
Daylight



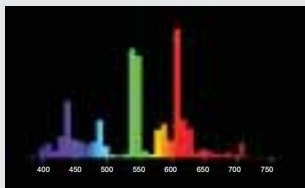
Colour 940 LUMILUX® DE LUXE
Cool White



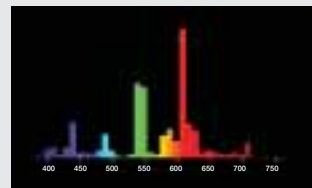
Colour 930 LUMILUX® DE LUXE
Warm White



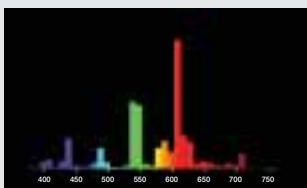
Colour 865 LUMILUX®
Cool Daylight



Colour 840 LUMILUX®
Cool White



Colour 830 LUMILUX®
Warm White



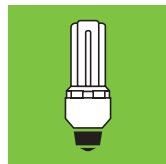
Colour 827 LUMILUX INTERNA®

Light colours and colour rendering properties of fluorescent lamps to DIN 5035

Light colours and colour rendering properties of fluorescent lamps to DIN 5035

| | |  |  |  |
|----------------------|----------------------------------|---|---|---|
| Group 1 very good | 1 A R _a 90 ... 100 | 954 LUMILUX® DE LUXE Daylight 5400 K | 940 LUMILUX® DE LUXE Cool White 3800 K | 930 LUMILUX® DE LUXE Warm White 3000 K |
| | 1 B R _a 80 ... 89 | 865 LUMILUX® Cool Daylight 6500 K | 840 LUMILUX® Cool White 4000 K | 830 LUMILUX® Warm White 3000 K |
| | | 860 LUMILUX® Daylight 6000 K | | 827 LUMILUX INTERNA® 2700 K 827 LUMILUX Warm White 2700 K |

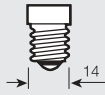
For an explanation of light colours see page 4.28.



Bases IEC/EN 60061-1



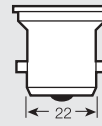
For direct connection to mains



E14
Sheet 7004-23



E27
Sheet 7004-21

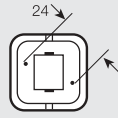


B22d
Sheet 7004-21

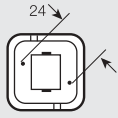
For choke/starter operation



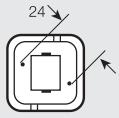
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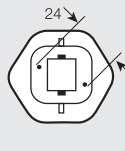
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Sheet 7004-78



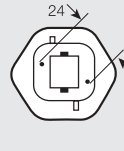
G24d-2
Sheet 7004-78



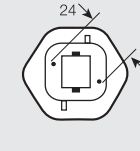
G24d-3
Sheet 7004-78



GX24d-1
Sheet 7004-78

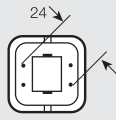


GX24d-2
Sheet 7004-78

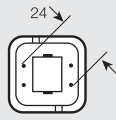


GX24d-3
Sheet 7004-78

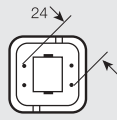
For HF operation



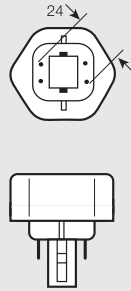
G24q-1
Sheet 7004-78



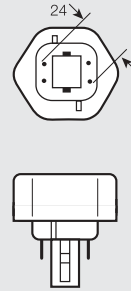
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Sheet 7004-78



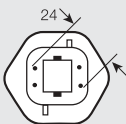
G24q-3
Sheet 7004-78



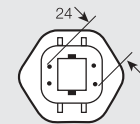
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Sheet 7004-78



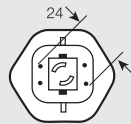
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Sheet 7004-78



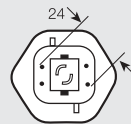
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Sheet 7004-78



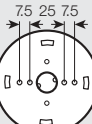
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Sheet 7004-78



GX24q-5
Sheet 7004-78

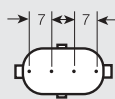


GX24q-6
Sheet 7004-78

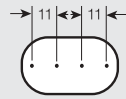


2G8-1
Sheet 7004-141

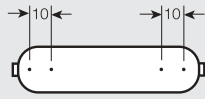
For HF operation



2G7
Sheet 7004-102



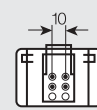
2G11
Sheet 7004-82



2G10
Sheet 7004-118

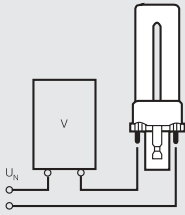


GR8
Sheet 7004-68

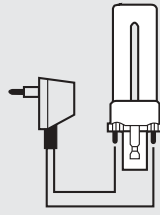


GR10q
Sheet 7004-77

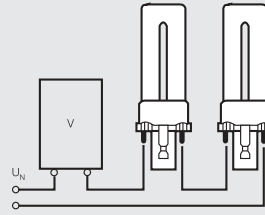
Circuit diagrams for conventional control gear



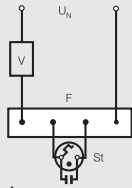
1
Single lamp with control gear
OSRAM DULUX® S 5W, 7W, 9W, 11W
OSRAM DULUX® D 10W, 13W, 18W, 26W
OSRAM DULUX® T 13W, 18W, 26W



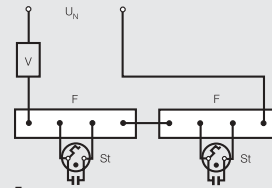
2
Single lamp with plug-in control gear
OSRAM DULUX® S 5W, 7W, 9W, 11W
OSRAM DULUX® D 10W, 13W
OSRAM DULUX® T 13W



3
Series connection with control gear
OSRAM DULUX® S 5W, 7W, 9W



4
Single lamp with starter St 111
or DEOS® St 171
OSRAM DULUX® L 18W, 24W, 36W
OSRAM DULUX® L 18W SP, 24W SP
OSRAM DULUX® F 18W, 24W, 36W



5
Series connection to 230V only
with starter St 151
OSRAM DULUX® L 18W
OSRAM DULUX® L 18W SP
OSRAM DULUX® F 18W

F = Four-pin lampholder
St = Starter
 U_N = Mains voltage
V = Control gear

For circuit diagrams for HF operation see Section 11.

