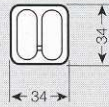
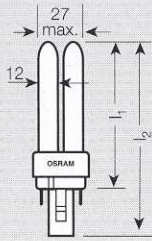




# OSRAM DULUX® D

## for conventional control gear (CCG)



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

**OSRAM DULUX® D**  
lamps are modern  
energy saving light  
sources with the  
dimensions of ordinary  
light bulbs.

Product reference	Product number	W		R <sub>a</sub>
<b>OSRAM DULUX® D</b>				
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	 <sup>1)</sup>	l <sub>1</sub> max. [mm]	l <sub>2</sub> max. [mm]	IEC l <sub>1</sub> [mm]	 <sup>*</sup>
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

Circuit diagrams 1 and 2 see page 3.31.

OSRAM DULUX® D 18 W lamps are suitable only for operating with 0.22 A control gear.

These compact fluorescent lamps are ideal for miniature luminaires and downlights for shallow recesses. They have twice the luminous flux as OSRAM DULUX® S lamps of the same length.

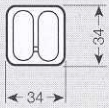
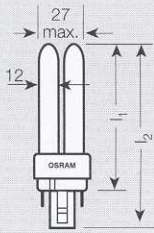
The lamps consume only 20 to 25% of the power of ordinary light bulbs of comparable brightness. They provide excellent quality light with very good colour rendering.





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

<sup>1)</sup> See page 3.30.

\* To ensure that your order reaches you quickly, please order standard pack quantities.

# 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<sub>a</sub>

## 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

OSRAM DULUX® D/E compact fluorescent lamps are designed for HF control gear and for dimmer systems.

Product reference

lm



l<sub>1</sub> max.  
[mm]

l<sub>2</sub> max.  
[mm]

IEC  
l<sub>1</sub> [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 3.31.

For QUICKTRONIC® ECG for high voltages and ACCUTRONIC® ECG for low voltages see Section 9.

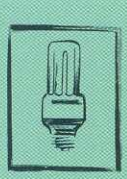
These compact fluorescent lamps can be operated on battery, solar or mains power. They are suitable for low voltage supply (e.g. with ACCUTRONIC®). They can also be fully dimmed. Their dimensions and wattages are identical to those of the successful standard OSRAM DULUX® D lamps. The fact that they can 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 light output with ECG operation.
- Comfortable light with ECG operation.
- Shortened base spigot to prevent two-pin lamps being fitted in new D/E holders, but still fits in old D/E holders.
- Twice the luminous flux as OSRAM DULUX® S/E of the same length.
- 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.

1) See page 3.30.

\* To ensure that your order reaches you quickly, please order standard pack quantities.

## Technical data



Lamp OSRAM DULUX® Watt	Lamp voltage for 50/60Hz V		Lamp current for 50/60Hz mA		Wattage with control gear CCG <sup>1)</sup> ECG W		Lumi- nance cd/cm <sup>2</sup>  LF 827, 830, 840	Compensation Parallel capacitor <sup>2)</sup> CCG 230V/50Hz µF	Series capacitor <sup>3)</sup> CCG µF
	for HF V		for HF mA						
DULUX S 5	35	—	180	—	10	—	2.5	2.2	—
DULUX S 7	47/45	—	175/180	—	11	—	2.6	2.1	—
DULUX S 9	60/59	—	170/180	—	13	—	2.8	2.0	—
DULUX S 11	91/—	—	155/—	—	15	—	2.7	1.7	—
DULUX D 10	64	—	190	—	15	—	4.0	2.2	1.4
DULUX D 13	91	—	175	—	17	—	4.0	1.8	1.4
DULUX D 18	100	—	220	—	23	—	4.5	2.2	1.7
DULUX D 26	105	—	325	—	31	—	5.5	3.2	2.5
DULUX T 13	91	—	175	—	17	—	4.2	1.8	1.4
DULUX T 18	100	—	225	—	23	—	4.7	2.3	1.7
DULUX T 26	105	—	325	—	31	—	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 L 18	58	50	375	320	24	19	2.1	4.2	2.7
DULUX L 24	87	75	345	300	30	27	2.1	3.6	2.7
DULUX L 36	106	90	435	360	43	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	—	4)	—	4)	—	4)	4)	—	—
DULUX F 18	58	50	375	320	24	19	2.4	4.2	2.7
DULUX F 24	87	75	345	300	29	27	2.5	3.6	2.7
DULUX F 36	106	90	435	360	43	39	3.0	4.4	3.4

\* ECG also available in two-lamp version.

For QUICKTRONIC® electronic control gear see Section 9.

For detailed technical information see the "Technical Guide".

1) Approximate values for low-loss control gear – depending on the control gear

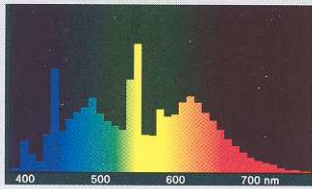
2) Design for cos phi = 0.95

Dielectric strength of the capacitors 250 V AC  
Capacitance tolerance ± 10%.

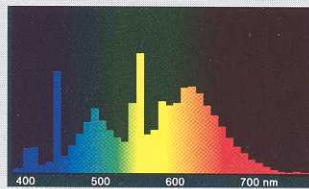
3) To maintain the specified operating and preheating values, close-tolerance capacitors (± 2%) and series resistors (± 1.5%) are required for series compensation. Check the product ranges of leading manufacturers. Dielectric strength of the capacitors = 450 V AC.

4) In preparation.

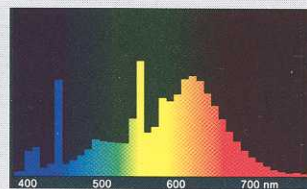
# Spectral power distribution of OSRAM DULUX® lamps



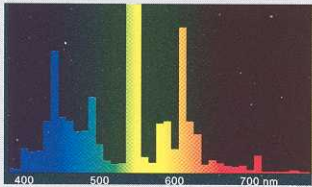
Colour 950 LUMILUX® DE LUXE Daylight



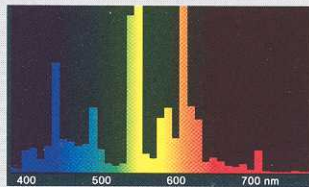
Colour 940 LUMILUX® DE LUXE Cool White



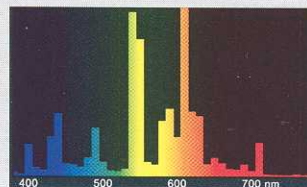
Colour 930 LUMILUX® DE LUXE Warm White



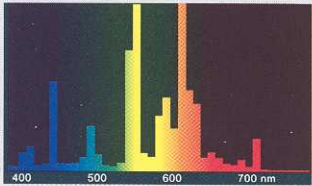
Colour 860 LUMILUX® Daylight



Colour 840 LUMILUX® Cool White



Colour 830 LUMILUX® Warm White

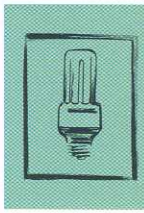


Colour 827 LUMILUX INTERNA®

## Spectral power distribution of OSRAM DULUX® lamps




Visible range from 380 to 780 nm

Vertical scale  $\frac{400 \text{ mW}}{1000 \text{ lm} \cdot 10 \text{ nm}}$



# Colour appearances and colour rendering properties of fluorescent lamps to DIN 5035

## Colour appearances and colour rendering properties of fluorescent lamps to DIN 5035

				
Group 1 excellent	1 A $R_a$ 90 ... 100	950 LUMILUX® DE LUXE Daylight 5400 K	940 LUMILUX® DE LUXE Cool White 3800 K	930 LUMILUX® DE LUXE Warm White 3000 K
very good	1 B $R_a$ 80 ... 89	860 LUMILUX® Daylight 6000 K	840 LUMILUX® Cool White 4000 K	830 LUMILUX® Warm White 3000 K
				827 LUMILUX INTERNA® 2700 K

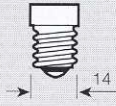
For an explanation of the colour appearances see page 4.23.

Note: These colour graphs do not show the colour distributions in great detail. The colour printing process is not able to provide an accurate match between the colours shown and the colours defined for the individual colour locations.

# Bases

## IEC/EN 60061-1

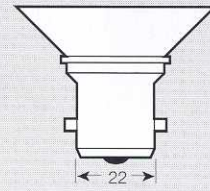
### For direct connection to mains



E14  
Sheet 7004-23



E27  
Sheet 7004-21

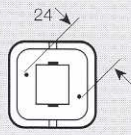


B22d  
Sheet 7004-10

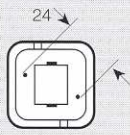
### For switch-start operation



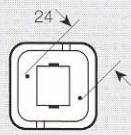
G23  
Sheet 7004-69



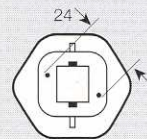
G24d-1  
Sheet 7004-78



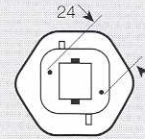
G24d-2  
Sheet 7004-78



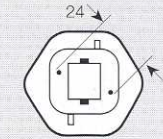
G24d-3  
Sheet 7004-78



GX24d-1  
Sheet 7004-78

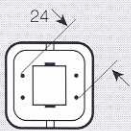


GX24d-2  
Sheet 7004-78

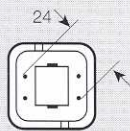


GX24d-3  
Sheet 7004-78

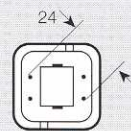
### For HF operation



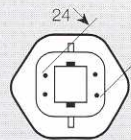
G24q-1  
Sheet 7004-78



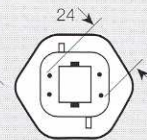
G24q-2  
Sheet 7004-78



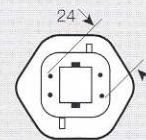
G24q-3  
Sheet 7004-78



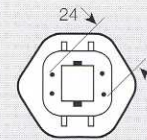
GX24q-1  
Sheet 7004-78



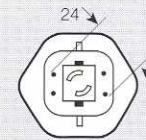
GX24q-2  
Sheet 7004-78



GX24q-3  
Sheet 7004-78

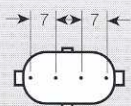


GX24q-4  
Sheet 7004-78

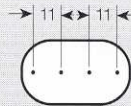


GX24q-5

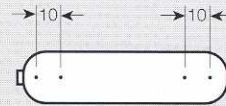
### For HF operation



2G7  
Sheet 7004-102

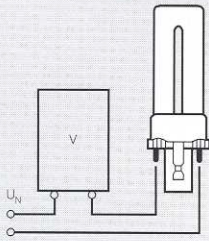


2G11  
Sheet 7004-82

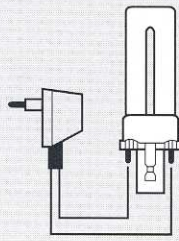


2G10  
Sheet 7004-118

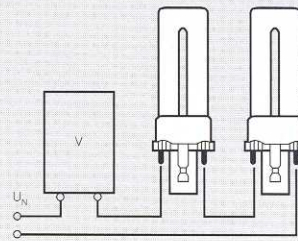
# Circuit diagrams for conventional control gear



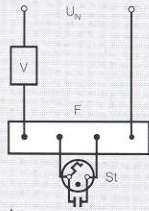
1  
Single lamp with control gear  
OSRAM DULUX® S 5W, 7W, 9W, 11W  
OSRAM DULUX® D 10W, 13W, 18W, 26W  
OSRAM DULUX® T 13W, 18W, 26W



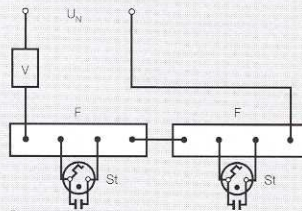
2  
Single lamp with plug-in control gear  
OSRAM DULUX® S 5W, 7W, 9W, 11W  
OSRAM DULUX® D 10W, 13W  
OSRAM DULUX® T 13W



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/240V  
with starter St 151  
OSRAM DULUX® L 18W  
OSRAM DULUX® L 18W SP  
OSRAM DULUX® F 18W

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

Circuit diagrams for HF operation see Section 9.

