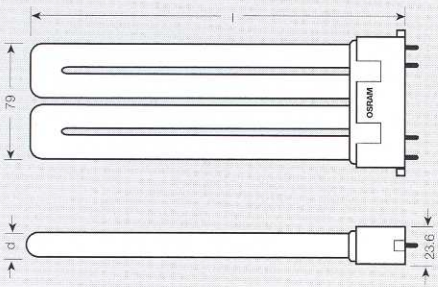
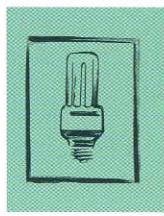
OSRAM DULUX® F









Product reference	Product number	W		Ra	lm		1)	l max. [mm]	IEC l max. [mm]	TUBE d [mm]	*
OSRAM DULUX® F											
DULUX F 18 W/840	4050300**333526**	18	LUMILUX Cool White	1 B	1100	2G10		122	122	17.5	10
DULUX F 18 W/830	4050300**333540**	18	LUMILUX Warm White	1 B	1100	2G10		122	122	17.5	10
DULUX F 18 W/827	4050300**333564**	18	LUMILUX INTERNA	1 B	1100	2G10		122	122	17.5	10
DULUX F 24 W/840	4050300**333588**	24	LUMILUX Cool White	1 B	1700	2G10		165	165	17.5	10
DULUX F 24 W/830	4050300**333601**	24	LUMILUX Warm White	1 B	1700	2G10		165	165	17.5	10
DULUX F 24 W/827	4050300**333625**	24	LUMILUX INTERNA	1 B	1700	2G10		165	165	17.5	10
DULUX F 36 W/840	4050300**299037**	36	LUMILUX Cool White	1 B	2800	2G10		217	217	17.5	10
DULUX F 36 W/830	4050300**299051**	36	LUMILUX Warm White	1 B	2800	2G10		217	217	17.5	10
DULUX F 36 W/827	4050300**312187**	36	LUMILUX INTERNA	1 B	2800	2G10		217	217	17.5	10

For circuit diagrams with conventional control gear and HF systems see page 3.31.
Electronic control gear QUICKTRONIC® see Section 9.

OSRAM DULUX® F compact fluorescent lamps are suitable for 2 M and 3 M luminaires.



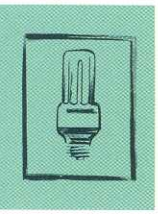
An interesting example of OSRAM DULUX® F lamps in downlights.

OSRAM DULUX® F lamps are new "flat" 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 offers 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.

1) See page 3.30.
* To ensure that your order reaches you quickly, please order standard pack quantities.

Technical data



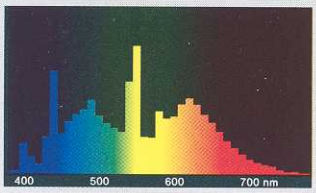
Lamp OSRAM DULUX® Watt	Lamp voltage for 50/60Hz V	for HF V	Lamp current for 50/60Hz mA	for HF mA	Wattage with control gear CCG[1] W	ECG W	Luminance cd/cm² LF 827, 830, 840	Compensation Parallel capacitor[2] CCG 230V/50Hz µF	Series capacitor[3] CCG µF
DULUX S 5	35	–	180	–	10	–	2.5	2.2	–
DULUX S 7	47/45	–	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".

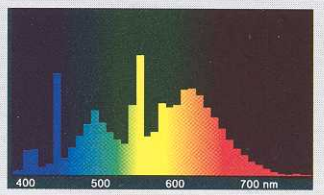
1) Approximate values for low-loss control gear – depending on the control gear
2) Design for cos phi = 0.95
Dielectric strength of the capacitors 250 V AC
Capacitance tolerance ± 10%.

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.

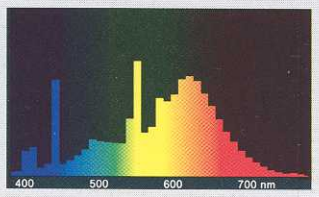
Spectral power distribution of OSRAM DULUX® lamps



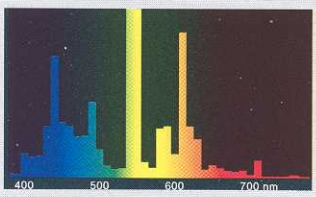
Colour 950 LUMILUX® DE LUXE Daylight



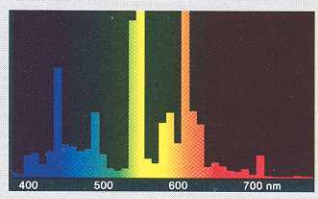
Colour 940 LUMILUX® DE LUXE Cool White



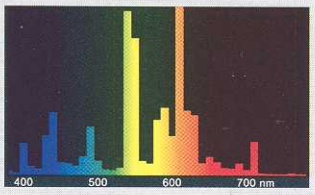
Colour 930 LUMILUX® DE LUXE Warm White



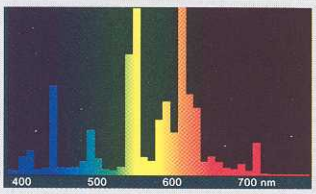
Colour 860 LUMILUX® Daylight



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

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

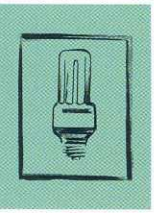
Colour appearances and colour rendering properties of fluorescent lamps to DIN 5035

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

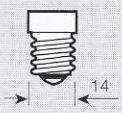
For an explanation of the colour appearances see page 4.23.

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



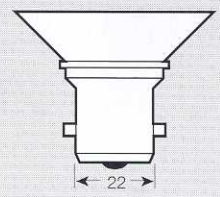
For direct connection to mains



E14
Sheet 7004-23

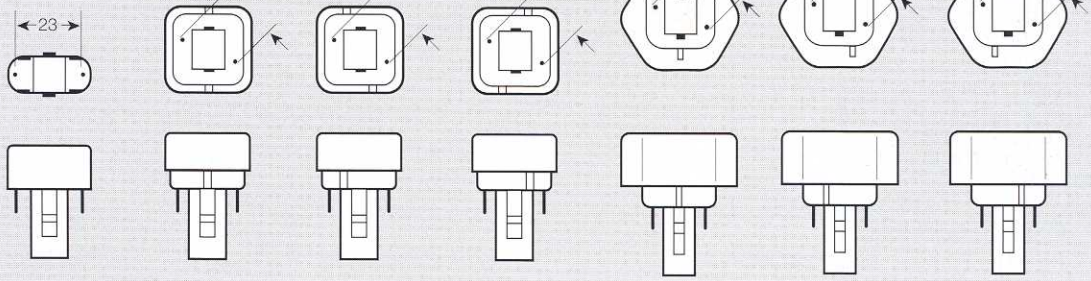


E27
Sheet 7004-21



B22d
Sheet 7004-10

For switch-start operation



G23
Sheet 7004-69

G24d-1
Sheet 7004-78

G24d-2
Sheet 7004-78

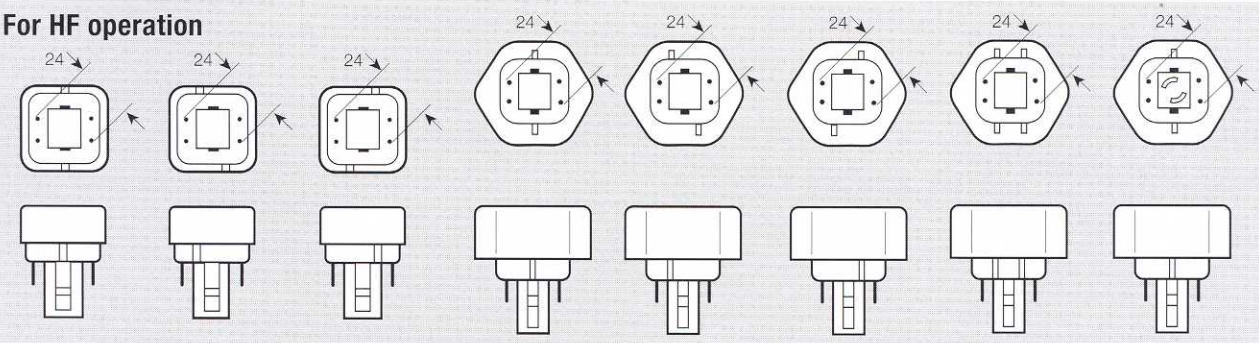
G24d-3
Sheet 7004-78

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

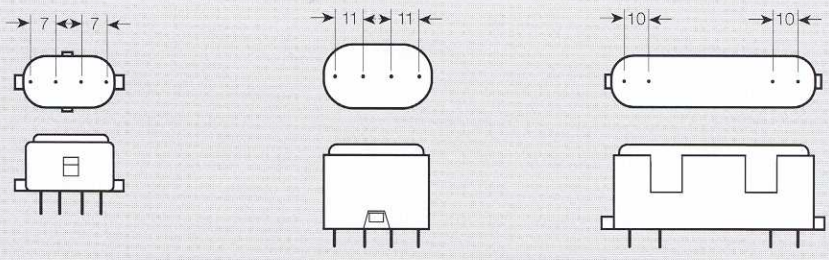
GX24q-2
Sheet 7004-78

GX24q-3
Sheet 7004-78

GX24q-4
Sheet 7004-78

GX24q-5

For HF operation

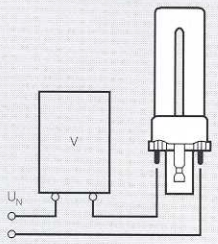


2G7
Sheet 7004-102

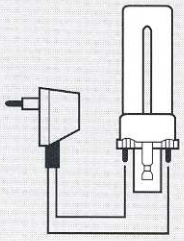
2G11
Sheet 7004-82

2G10
Sheet 7004-118

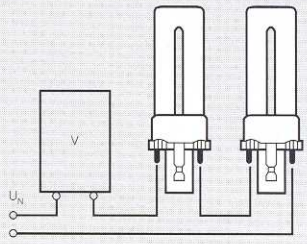
Circuit diagrams
for conventional control gear



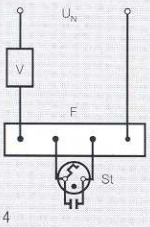
1
Single lamp with conrol gear
OSRAM DULUX® S 5W, 7W, 9W, 11W
OSRAM DULUX® D 10W, 13W, 18W, 26W
OSRAM DULUX® T 13W, 18W, 26W



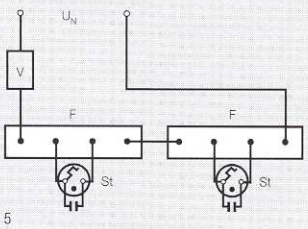
2
Single lamp with plug-in control gear
OSRAM DULUX® S 5W, 7W, 9W, 11W
OSRAM DULUX® D 10W, 13W
OSRAM DULUX® T 13W



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.