

www.osram.com

# DULUX F

EXREMELY FLAT DESIGN & FOR UNIFORM LIGHTING



DULUX® F



QTP-M 1x26-42®

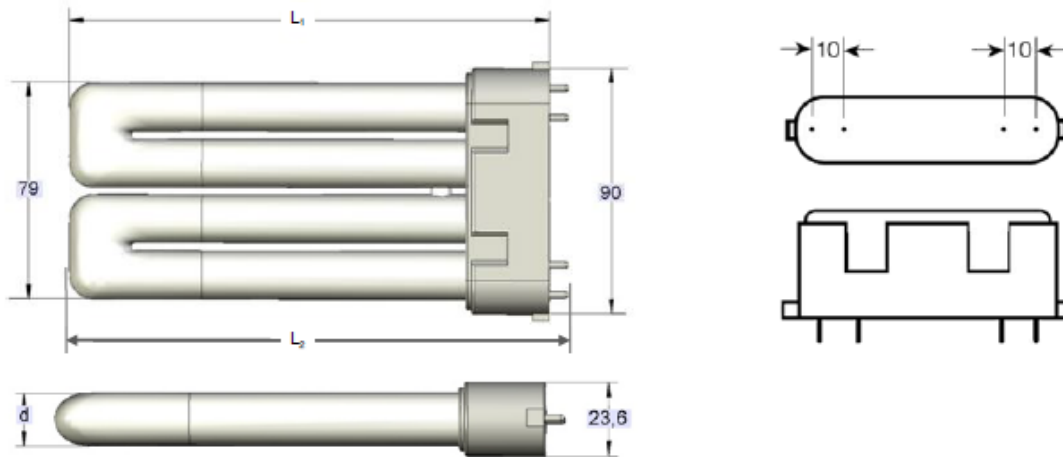
## Benefits

- Very economical
- Good quality of light
- Good lumen maintenance
- Environmental friendly
- Long service life time

## Product Features

- Extremely flat dimensions
- Good color rendering ( $R_a$  80...89)
- Average life time: up to 13.000 h
- Operation with electrical and conventional control gear + starter

## Dimensions



Description	Base	Max Length L1 [mm]	Max Length L1 IEC [mm]	Max Length L2 [mm]	Tube Diameter d [mm]
DULUX® F 18 W	2G10	122	122	127	17.5
DULUX® F 24 W	2G10	165	165	170	17.5
DULUX® F 36 W	2G10	217	217	222	17.5

## Electrical Data<sup>1</sup>

Lamps operated with **50Hz** reference ballast at 25 °C (100 h aged) ambient temperature

DULUX® F	Lamp Voltage rated [V]	Lamp Current rated [mA]	Lamp Power rated [W]	Compensation parallel Capacitor CCG <sup>2</sup> mode <sup>3</sup> [µF]	Compensation series Capacitor CCG mode <sup>4</sup> [µF]
18 W	58	375	18	4.2	2.7
24 W	87	345	24	3.6	2.7

<sup>1</sup> According to IEC 60901.

<sup>2</sup> Conventional Control Gear

<sup>3</sup> For cos phi = 0.95; Dielectric strength of the capacitor 250V AC; capacitive tolerance +/- 10%

<sup>4</sup> Dielectric strength of the capacitor 450V AC

36 W	106	435	36	4.4	3.4
------	-----	-----	----	-----	-----

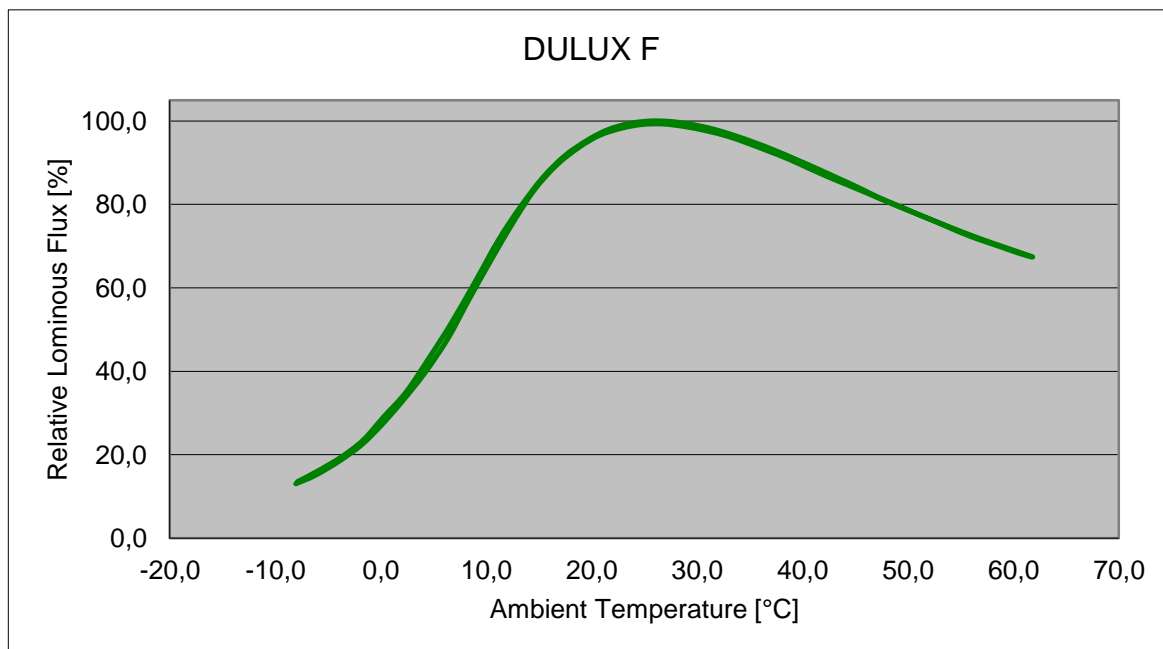
Lamps operated with HF<sup>5</sup> reference control gear at 25 °C (100 h aged) ambient temperature

DULUX® F	Lamp Voltage rated [V]	Lamp Current rated [mA]	Lamp Power rated [W]
18 W	50	320	16
24 W	75	300	22
36 W	90	360	32

## Photometrical Data at 25 °C (100 h aged) ambient temperature<sup>6</sup>

DULUX® F	Light Color LUMILUX®	Color Rendering Index (CRI), Ra	Luminance (LC <sup>7</sup> 840) [cd/cm <sup>2</sup> ]	Target Color Coordinate X	Target Color Coordinate Y	Nominal Luminous Flux [lm]	Efficacy 25 °C [lm/W]	Energy Efficiency Class
18 W	827 INTERNA	80 ... 89	2.4	0.455	0.415	1100	61	B
18 W	830 Warm White	80 ... 89	2.4	0.439	0.400	1100	61	B
18 W	840 Cool White	80 ... 89	2.4	0.386	0.372	1100	61	B
24 W	827 INTERNA	80 ... 89	2.5	0.455	0.415	1700	71	B
24 W	830 Warm White	80 ... 89	2.5	0.439	0.400	1700	71	B
24 W	840 Cool White	80 ... 89	2.5	0.386	0.372	1700	71	B
36 W	827 INTERNA	80 ... 89	3.0	0.455	0.415	2800	78	B
36 W	830 Warm White	80 ... 89	3.0	0.439	0.400	2800	78	B
36 W	840 Cool White	80 ... 89	3.0	0.386	0.372	2800	78	B

## Relative Luminous Flux / Ambient Temperature



For more detailed information please refer to our technical guide – Compact Fluorescent Lamps. Free download at [www.osram.com](http://www.osram.com)

<sup>5</sup> High Frequency

<sup>6</sup> Measurement in accordance with IEC 60901, annex C and the relevant annex on rated colour characteristics in IEC 60081.

<sup>7</sup> Light Color

## Lifetime<sup>8</sup>

DULUX® F	ECG <sup>9</sup> preheated IEC switching cycle <sup>10</sup>	CCG IEC switching cycle
<b>B50<sup>11</sup></b>	13000	10000
<b>Service Lifetime<sup>12</sup></b>	9100	6500
<b>LLMF<sup>13</sup> 2000 h</b>	0.90	0,85
<b>LLMF 4000 h</b>	0.86	0.80
<b>LLMF 6000 h</b>	0.83	0.77
<b>LLMF 8000 h</b>	0.81	0.75
<b>LLMF 10000 h</b>	0.80	-
<b>LSF<sup>14</sup> 2000 h</b>	0,99	0.99
<b>LSF 4000 h</b>	0.99	0.99
<b>LSF 6000 h</b>	0.95	0.95
<b>LSF 8.000 h</b>	0.88	0.81
<b>LSF 10.000 h</b>	0.75	-

## Logistic Data

Description	EAN 10	EAN 40	Packaging Unit
DULUX® F 18W/827	4050300333564	4050300333571	10
DULUX® F 18W/830	4050300333540	4050300333557	10
DULUX® F 18W/840	4050300333526	4050300333533	10
DULUX® F 24W/827	4050300333625	4050300333632	10
DULUX® F 24W/830	4050300333601	4050300333618	10
DULUX® F 24W/840	4050300333588	4050300333595	10
DULUX® F 36W/827	4050300312187	4050300312194	10
DULUX® F 36W/830	4050300299051	4050300299068	10
DULUX® F 36W/840	4050300299037	4050300299044	10

<sup>8</sup> Measurement in accordance with IEC 60901, annex C.

<sup>9</sup> Electronic Control Gear

<sup>10</sup> Switching cycle 165 min. on, 15 min. off (according to IEC)

<sup>11</sup> Average rated lamp life (B50) is the average value of the life time for an entity of lamps operated under standardized conditions until 50% failure. In other words, this is the operation time at which, for a standardized 3-hour switching cycle (165 minutes on / 15 minutes off (according to IEC)), 50% of a sample population of lamps have failed.

<sup>12</sup> Service life time is the mathematical life time (maintenance multiplied with the % of failed lamps e.g. B10) for lamps in an installation after which the installation luminous flux (100 h value) decreased by 30% (decrease in luminous flux and failed lamps) for indoor lighting

<sup>13</sup> Lamp Lumen Maintenance Factor (Lamp luminous flux in %): Ratio of the luminous flux of a specific quantity of lamps at a defined number of hours of operation to their luminous flux at 100 h

<sup>14</sup> Lamp Survival Factor (Lamp survival in %): Ratio of the number of electrically intact lamps to the total number of lamps

## Lamp/ECG System Combination

Lamp	ECG	EAN 10 ECG	Luminous flux @25°C [lm]	System power [W]	I <sub>N</sub> [A]	Power Factor ECG	System luminous efficacy [lm/W]	Length [mm]	Width [mm]	Height [mm]	Distance between holes [mm]	T <sub>a</sub> [°C]
DULUX® F 18 W	QTi DALI 1x18/220-240 DIM	4050300870403	1100	18	0.08	0.97	61	360.00	30.00	21.00	350	-20...+50 °C
	QTi DALI 2x18/220-240 DIM	4050300870403	2200	37	0.16	0.97	59	360.00	30.00	21.00	350	-20...+50 °C
	QTi DALI 3x18/220-240 DIM	4050300870403	3300	53.6	0.24	0.98	62	360.00	30.00	21.00	350	-20...+50 °C
	QTi DALI 4x18/220-240 DIM	4050300870403	4400	69.3	0.31	0.98	63	360.00	30.00	21.00	350	-20...+50 °C
	QTi 1x18/220-240 DIM	4050300870601	1100	18	0.08	0.97	61	360.00	30.00	21.00	350	-20...+50 °C
	QTi 2x18/220-240 DIM	4050300870601	2200	37	0.16	0.97	59	360.00	30.00	21.00	350	-20...+50 °C
	QTi 3x18/220-240 DIM	4050300870601	3300	53.6	0.24	0.98	62	360.00	30.00	21.00	350	-20...+50 °C
	QTi 4x18/220-240 DIM	4050300870601	4400	69.3	0.31	0.98	63	360.00	30.00	21.00	350	-20...+50 °C
	QTP-DL 1x18-24	4008321117861	1100	18	0.085	0.95	61	239.00	30.00	28.00	229	-20...+50 °C
	QTP-DL 2x18-24	4008321117885	2200	36	0.16	0.98	61	239.00	40.00	28.00	229	-20...+50 °C
	QTP-M 1x26-42	4008321329134	1650	19	0.09	0.88 c	87	103.00	67.00	31.00	57	-10...+50 °C
	QTP-M 2x26-32	4008321329158	3300	36	0.16	0.95	92	123.00	79.00	33.00	67	-20...+50 °C
	QT-ECO 1x18-24/220-240 L	4050300660417	1000	18	0.13	0.60	56	150.00	22.00	22.00	140	-15...+50 °C
	QT-ECO 1x18-24/220-240 S	4050300638560	1000	18	0.13	0.60	56	80.00	40.00	22.00	72...75	-15...+50 °C
DULUX® F 24 W	QTi DALI 1x14/24/220-240 DIM	4050300870380	1700	25	0.11	0.98	68	360.00	30.00	21.00	350	+10...+50 °C
	QTi DALI 2x14/24/220-240 DIM	4050300870861	3400	49	0.22	0.98	69	423.00	30.00	21.00	415	+10...+50 °C
	QTi DALI 3x14/24/220-240 DIM	4008321069955	5100	73.4	0.32	0.99	69	360.00	40.00	21.00	350	+10...+50 °C
	QTi DALI 4x14/24/220-240 DIM	4008321070036	6800	97.6	0.43	0.99	70	360.00	40.00	21.00	350	+10...+50 °C
	QTi 1x14/24/220-240 DIM	4050300870922	1700	25	0.11	0.98	68	360.00	30.00	31.00	350	+10...+50 °C
	QTi 2x14/24/220-240 DIM	4050300870946	3400	49	0.22	0.98	69	423.00	30.00	21.00	415	+10...+50 °C
	QTi 3x14/24/220-240 DIM	4008321069719	5100	74	0.32	0.99	69	360.00	40.00	21.00	350	+10...+50 °C
	QTi 4x14/24/220-240 DIM	4008321069993	6800	97.6	0.43	0.99	70	360.00	40.00	21.00	350	+10...+50 °C
	QTP-DL 1x18-24	4008321117861	1700	26	0.115	0.95	65	239.00	30.00	28.00	229	-20...+50 °C
	QTP-DL 2x18-24	4008321117885	3400	49	0.22	0.98	69	239.00	40.00	28.00	229	-20...+50 °C
	QTP-M 1x26-42	4008321329134	1650	25	0.12	0.94 c	66	103.00	67.00	31.00	110	-20...+50 °C
	QTP-M 2x26-32	4008321329158	3300	48	0.21	0.97	69	123.00	79.00	33.00	129.5	-20...+50 °C
	QT-ECO 1x18-24/220-240 L	4050300660417	1500	22.5	0.16	0.60	67	150.00	22.00	22.00	140	-15...+50 °C
	QT-ECO 1x18-24/220-240 S	4050300638560	1500	22.5	0.16	0.60	67	80.00	40.00	22.00	72...75	-15...+50 °C
	QT-M 2x26-42/220-240 S	4008321110022	3400	54	0.23	0.97	63	123.00	79.00	33.00	129.5	-20...+50 °C

Lamp	ECG	EAN 10 ECG	Luminous flux @25°C [lm]	System power [W]	I <sub>N</sub> [A]	Power Factor ECG [λ]	System luminous efficacy [lm/W]	Length [mm]	Width [mm]	Height [mm]	Distance between holes [mm]	T <sub>a</sub> [°C]
DULUX® F 36 W	QTi DALI 1x36/220-240 DIM	4050300870427	2900	36	0.16	0.97	81	360.00	30.00	21.00	350	+10...+50 °C
	QTi DALI 2x36/220-240 DIM	4050300870885	5800	69	0.31	0.98	84	423.00	30.00	21.00	415	+10...+50 °C
	QTi 1x14/24/21/39 GII	4008321383334	2750	34	0.15	0.96	81	360.00	30.00	21.00	350	-20...+50 °C
	QTi 1x36/220-240 DIM	4050300870625	2900	36	0.16	0.97	81	360.00	30.00	21.00	350	+10...+50 °C
	QTi 2x14/24/21/39 GII	4008321383396	5600	66	0.29	0.98	85	360.00	30.00	21.00	350	-20...+50 °C
	QTi 2x36/220-240 DIM	4050300870755	5800	69	0.31	0.98	84	425.00	30.00	21.00	415	+10...+50 °C
	QTP-DL 1x36-40	4008321117908	2800	35	0.17	0.99	80	239.00	30.00	28.00	229	-20...+50 °C
	QTP-DL 2x36-40	4008321117922	5600	68	0.33	0.99	82	280.00	40.00	28.00	270	-20...+50 °C
	QTP-M 1x26-42	4008321329134	2700	35	0.16	0.96	77	103.00	67.00	31.00	110	-20...+50 °C
	QTP-M 2x26-32	4008321329158	5400	68	0.30	0.97	79	123.00	79.00	33.00	129.5	-20...+50 °C
	QT-M 2x26-42/220-240 S	4008321110022	5400	70	0.30	0.97	77	123.00	79.00	33.00	129.5	-20...+50 °C

For more information on ECG refer to <http://www.osram.com/ecg>

For more information on System Guarantee refer to <http://www.osram.com/guarantee>

In case of lamp breakage: [www.osram.com/brokenlamp](http://www.osram.com/brokenlamp)

For more information technical Information see Technical guide. Free download at [www.osram.com](http://www.osram.com)