

# DULUX® D/E EOL ECOLOGIC®

## 4-Pin Compact Fluorescent Lamps With End-Of-Life Protection



- Compact fluorescent lamps for use on dimming and electronic ballasts
- End-of-Life (EOL) shut down protection
- Pass Federal TCLP tests
  - Pair with linear ECOLOGIC lamps for TCLP compliant installations
- Uses about 1/4 the energy of an incandescent lamp with similar lumen output
- Long 12,000 hour average rated life
  - Typically 12-16 times longer than standard incandescents
  - Reduces relamping requirements and related costs
- Rare earth phosphors – 82 CRI
- 2700K, 3000K, 3500K and 4100K color temperatures
- 86% lumen maintenance



ECOLOGIC is a comprehensive program of OSRAM SYLVANIA focused on addressing environmental issues at all stages of lamp life.

**SYLVANIA DULUX D/E EOL ECOLOGIC lamps are long-life, energy-saving alternatives for incandescent lamps. When paired with SYLVANIA linear ECOLOGIC lamps, all the fluorescent lamps in an installation will be TCLP compliant. Each lamp has a built in feature that will safely shut the lamp down at end of lamp life.**

NEMA<sup>1</sup> has expressed concern regarding the end-of-life operation of small diameter (T5 or less), 4-pin, compact fluorescent lamps. When operated on high frequency, electronic ballasts, these lamps may experience an abnormal end-of-life phenomenon – bulb wall cracking near the lamp base and/or overheating in the base area and possibly melting the lamp base and socket. NEMA recommends that high frequency, electronic ballasts have an end-of-life shutdown circuit which will reliably shut down the system in the rare event of abnormal end-of-life.

1. NEMA: National Electrical Manufacturers Association

### Product Availability

Lamp Type	Wattage	Rated Lumens
CF13DD/E/827	13	900
CF13DD/E/830	13	900
CF13DD/E/835	13	900
CF13DD/E/841	13	900
CF18DD/E/827	18	1150
CF18DD/E/830	18	1150
CF18DD/E/835	18	1150
CF18DD/E/841	18	1150
CF26DD/E/827	26	1710
CF26DD/E/830	26	1710
CF26DD/E/835	26	1710
CF26DD/E/841	26	1710

The DULUX D/E EOL ECOLOGIC lamps provide protection for existing ballasts with no end-of-life protection. DULUX D/E EOL ECOLOGIC lamps can also be used with ballasts with end-of-life protection to provide additional protection.

### Application Information

#### Applications

Recessed ceiling fixtures	Showcase lighting
Wall sconces	Task lighting
Exit signs	Garden and walkway lighting

#### Fixtures

Contact your local fixture agent for available fixtures

#### Ballast Information

Contact your OSRAM SYLVANIA representative for information about compatible electronic operating systems

#### Application Notes

1. 4-Pin, lamps designed for dimming and electronic ballast operation.
2. Minimum starting temperature depends on ballast.
3. Rule of thumb: to estimate the appropriate compact fluorescent lamp wattage, divide the incandescent wattage by 4.
4. Lamps manufactured to prevent abnormal end-of-life lamp failures.
5. Equipment manufacturers are advised to consult ANSI and IEC standards for the maximum allowable dimensions and temperature to insure compatibility with similar products.

**Sample Specification**

Lamp(s) shall be (a) DULUX D/E ECOLOGIC (CF13DD/E, CF18DD/E or CF26DD/E) lamps with internal end-of-life shut down feature and pass existing Federal TCLP limits. Lamps shall have an average rated life of 12,000 hours, a correlated color temperature of (2700K, 3000K, 3500K or 4100K), and a CRI of 82. Lamps shall have a (G24q-1, G24q-2, G24q-3) plug-in, 4-pin base and be suitable for use on electronic and dimming ballasts. Lamps shall be operated by QUICKTRONIC® Professional ballasts. Both lamps and ballasts covered by the QUICK 60+® system warranty.

**Ordering and Specification Information**

Item Number	Ordering Abbreviation	NEMA Generic Description	Watts	Base	Initial Lumens	Mean Lumens <sup>1</sup>	Color Temp.	CRI	Avg. Rated Life (hrs.) <sup>2</sup>	Amps <sup>3</sup>	Volts <sup>3</sup>
20682	CF13DD/E/827	CFQ13W/G24q/27	13	G24q-1	900	774	2700K	82	12,000	0.165	77
20721	CF13DD/E/830	CFQ13W/G24q/30	13	G24q-1	900	774	3000K	82	12,000	0.165	77
20671	CF13DD/E/835	CFQ13W/G24q/35	13	G24q-1	900	774	3500K	82	12,000	0.165	77
20667	CF13DD/E/841	CFQ13W/G24q/41	13	G24q-1	900	774	4100K	82	12,000	0.165	77
20683	CF18DD/E/827	CFQ18W/G24q/27	18	G24q-2	1150	989	2700K	82	12,000	0.210	80
20724	CF18DD/E/830	CFQ18W/G24q/30	18	G24q-2	1150	989	3000K	82	12,000	0.210	80
20672	CF18DD/E/835	CFQ18W/G24q/35	18	G24q-2	1150	989	3500K	82	12,000	0.210	80
20668	CF18DD/E/841	CFQ18W/G24q/41	18	G24q-2	1150	989	4100K	82	12,000	0.210	80
20684	CF26DD/E/827	CFQ26W/G24q/27	26	G24q-3	1710	1470	2700K	82	12,000	0.300	80
20722	CF26DD/E/830	CFQ26W/G24q/30	26	G24q-3	1710	1470	3000K	82	12,000	0.300	80
20673	CF26DD/E/835	CFQ26W/G24q/35	26	G24q-3	1710	1470	3500K	82	12,000	0.300	80
20669	CF26DD/E/841	CFQ26W/G24q/41	26	G24q-3	1710	1470	4100K	82	12,000	0.300	80

1. Measured at 40% (4,000 hours) of rated life.
2. Based on 3 hours per start. Number of operating hours when half have failed and half are still operating.
3. At 25 KHz

**Lamp Comparison**

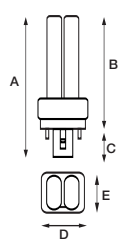
*Compact Fluorescent vs Incandescent*

Lamp Type	Rated Lamp Life	Ballast Factor	System Lumens	System Wattage	System LPW	Energy Savings
2 - 26 Watt DULUX D ECOLOGIC	12,000 hours	1.0	3600	48	51	76%
1 - 200A Watt Incandescent	750 hours	1.0	3800	200	75	-

**Ordering Guide**

CF	26	DD	/	E	/	8	27
Compact Fluorescent	Wattage: 13, 18, or 26 Watts	DULUX Double		for electronic and dimming ballasts		8=82 CRI	27=2700K 30=3000K 35=3500K 41=4100K

**Dimensions**



Ordering Abbreviation	(A) Max. Overall Length [in (mm)]	(B) Base Face to Top of Lamp [in (mm)]	(C) Guide Post Length [in (mm)]	(D) Max. Base Width [in (mm)]
CF13DD/E	5.2 (132)	4.5 (114)	0.62 (16)	1.4 (35)
CF18DD/E	5.8 (147)	5.1 (130)	0.62 (16)	1.4 (35)
CF26DD/E	6.6 (168)	5.9 (150)	0.62 (16)	1.4 (35)

T4 diameter glass tubing = 0.5 inches (12.7 mm)

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**Technical Information**

**Spectral Power Distributions**

