The high-performance electrodeless fluorescent lamp

OSRAM ENDURA®

SEE THE WORLD IN A NEW LIGHT

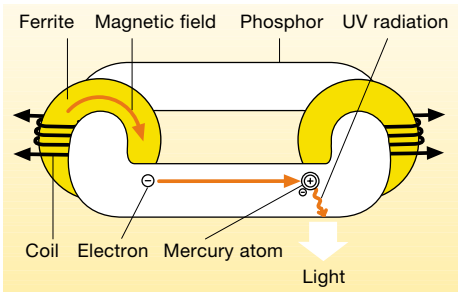
OSRAM

OSRAM ENDURA® – the high-performance electrodeless lighting system with a 60,000 hour life

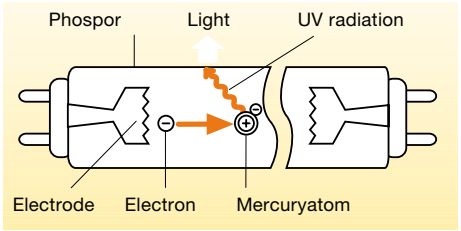
- Extremely long lamp life of 60,000 hours
- High luminous flux
- Instant flicker-free start
- High luminous efficacy: >80 lm/W
- Excellent quality of light: colour rendering R_a>80
- High luminous flux over a wide range of temperatures thanks to amalgam technology
- Low operating frequency: 250 kHz
- Ideal for low-profile luminaires
- Low loss of luminous flux
- Reliable ignition at temperatures down to –40 °C, depending on ECG
- DC operation possible
- Lamp and ECG may be separated up to 20 m, depending on ECG

Unique operating principle for unique avantages

In contrast to conventional fluorescent lamps, the discharge needed to generate light in the OSRAM ENDURA® lamp does not take place between two electrodes but without electrodes in a closed "ring" with no starting point and no end point. The energy is "injected" via ferrite rings from outside using magnetic fields (induction principle). The lamp therefore has no parts that can wear out and lasts so long that it may never need changing.



Principle of OSRAM ENDURA®



Principle of a conventional fluorescent lamp

Light on schedule. With their extremely long life and high luminous efficacy, ENDURA® lamps provide reliable and comfortable lighting in the underground station at Madrid airport.

Guarantee Level 2
OSRAM System Guarantee

There is a 5-year guarantee on the complete ENDURA ¨ system (QUICKTRONIC ¨ ENDURA electronic control gear and ENDURA ¨ lamp).

For the System Guarantee, the lighting system must be registered with OSRAM on the internet at www.osram.com/system-guarantee . Here you will also find further information and conditions relating to Guarantee Level 2.

Extremely long life and high luminous efficacy

OSRAM ENDURA® has an extremely long life of 60,000 hours. This is four to five times the normal service life of a conventional fluorescent lamp.

The ENDURA® system comprises an electrodeless fluorescent lamp and electronic control gear, achieving luminous flux values that no fluorescent lamp has ever achieved before.
The luminous efficacy of the ENDURA® is comparable to that of fluorescent lamps.

Reliable long-life light with impressive comfort

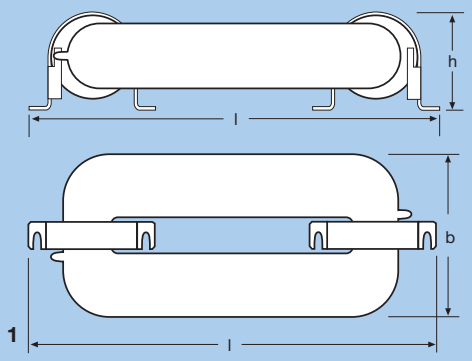
Because it uses electronic control gear, the ENDURA® enjoys the benefits normally associated with QUICKTRONIC®/LUMILUX® fluorescent lamps, such as instant flicker-free starting and pleasant flicker-free light.

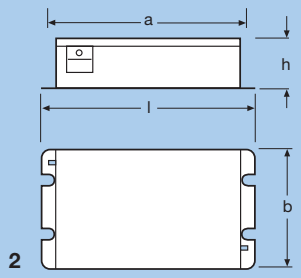
Its extremely long life makes it perfect for all applications in which relamping can only be done at enormous cost or where safety is of paramount importance. The low overall height of the OSRAM ENDURA® means it can be used in low-profile luminaires.

***Ideal for tunnel lighting.
Safe driving from start to finish with bright flicker-free light and extremely long relamping intervals.***

Technical data

Dimensions in mm





ENDURA®

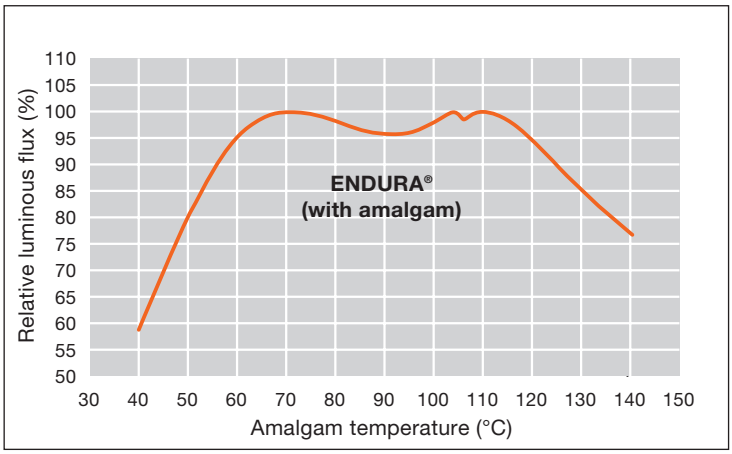
Type	Product No. (EAN)	Rated Wattage	Colour	Colour rendering index (CRI)	Luminous flux	Length l	Width b	Height h	Fig. no.
ENDURA 70 W/830	4050300**817293**	72 W	LUMILUX Warm White	$R_a \geq 80$	6500 lm	315 mm	139 mm	75 mm	1
ENDURA 70 W/840	4050300**817286**	72 W	LUMILUX Cool White	$R_a \geq 80$	6500 lm	315 mm	139 mm	75 mm	1
ENDURA 100 W/830	4050300**668420**	100 W	LUMILUX Warm White	$R_a \geq 80$	8000 lm	315 mm	139 mm	75 mm	1
ENDURA 100 W/840	4050300**668437**	100 W	LUMILUX Cool White	$R_a \geq 80$	8000 lm	315 mm	139 mm	75 mm	1
ENDURA 150 W/830	4050300**668444**	150 W	LUMILUX Warm White	$R_a \geq 80$	12000 lm	415 mm	139 mm	75 mm	1
ENDURA 150 W/840	4050300**668451**	150 W	LUMILUX Cool White	$R_a \geq 80$	12000 lm	415 mm	139 mm	75 mm	1

QUICKTRONIC® for OSRAM ENDURA®

Type	Product No. (EAN)	Lamp	Permissible voltage fluctuations	Mains frequency	Mains current at 230/240 V	Power factor λ	System wattage	Luminous flux
QT ENDURA 70-100/120-240 S	4050300**804668**	70 W 100 W	108 V to 264 V 108 V to 264 V	approx. 250 kHz approx. 250 kHz	0,34 A 0,46 A	> 0,9c > 0,9c	81 W 104 W	6500 lm 8000 lm
QT ENDURA 100-150/120-240 S	4050300**662589**	100 W 150 W	108 V to 264 V 108 V to 264 V	approx. 250 kHz approx. 250 kHz	0,62 A 0,69 A	> 0,9c > 0,9c	146 W 153 W	11000 lm 12000 lm

Type	Temperature range	Lenght l	Width b	Height h	Distance between holes a	Max. distance between Lamp/ECG	Weight	Fig. no.
QT ENDURA 70-100/120-240 S	–20°C to +50°C	181 mm	100 mm	43 mm	170 mm	in preparation 70 W	950 g	2
QT ENDURA 70-100/120-240 S	–40°C to +50°C	181 mm	100 mm	43 mm	170 mm	in preparation 100 W	950 g	2
QT ENDURA 100-150/120-240 S	–40°C to +50°C	181 mm	100 mm	43 mm	170 mm	20 m (100 W)	1140 g	2
QT ENDURA 100-150/120-240 S	–40°C to +50°C	181 mm	100 mm	43 mm	170 mm	20 m (150 W)	1140 g	2

Amalgam technology makes a high luminous flux over a wide range of temperatures possible: >90 % at amalgam temperatures from 55°C to 125°C



The lifetime of the OSRAM ENDURA® system is determined primarily by the ECG lifetime, which is 60,000 hours with a failure rate of 10% when operated at the maximum temperature permitted at the measuring point on the ECG housing. If the temperature is under the maximum permitted, the lifetime increases.

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