Switch on...switch off... switch on...

Powerful instant light with LINEX® – Linear Excimer Lamp System

SEE THE WORLD IN A NEW LIGHT

OSRAM

Ready. Steady. Light!
LINEX® – Linear Excimer Lamp System

Instant light – as quick as lightning

LINEX® from OSRAM is an innovative, extremely powerful and durable lamp system. Its name is derived from the description of its technology: a LINear EXcimer lamp coupled with a high frequency electronic power supply.
In less than 100 milliseconds it provides extremely intense bright light – and it switches off even faster.
The persistence time is less than 50 milliseconds.
The inverter drives the lamp in a pulsed DC mode with an operating frequency of greater than 80 kHz, which ensures flicker-free light.
The result is a unique system that is well suited for technical commercial and industrial applications.

Quite obviously – further light strengths

The xenon-filled LINEX® lamps achieve a very high illuminance of up to 80,000 lux, which is 2.5 times faster than conventional xenon fluorescent lamps operated in a sinusoidal AC mode. The quality of the light produced is exceptional with crisp daylight color temperature and excellent color rendering characteristics resulting from the triphosphor coating.
The absence of mercury in the LINEX® lamp not only results in an environmentally friendlier lighting solution, but also produces a light source with nearly constant, temperature-independent color throughout its long life of up to 10,000 hours.

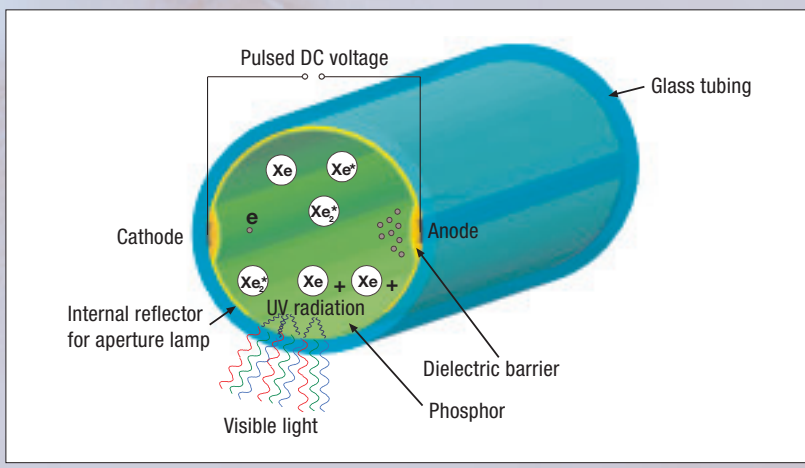
Switch as switch can – over 10 million times

LINEX® lamps are available in 24, 30 and 40 W versions and the state-of-the-art systems are incredibly robust with performance unaffected by rapid switching cycles. The lamps can be switched on and off several million times with no detriment to lamp life or maintenance characteristics.
The internal electrodes make the lamp extremely reliable with a special dielectric barrier coating that shields them against corrosion and damage from the gas discharge.

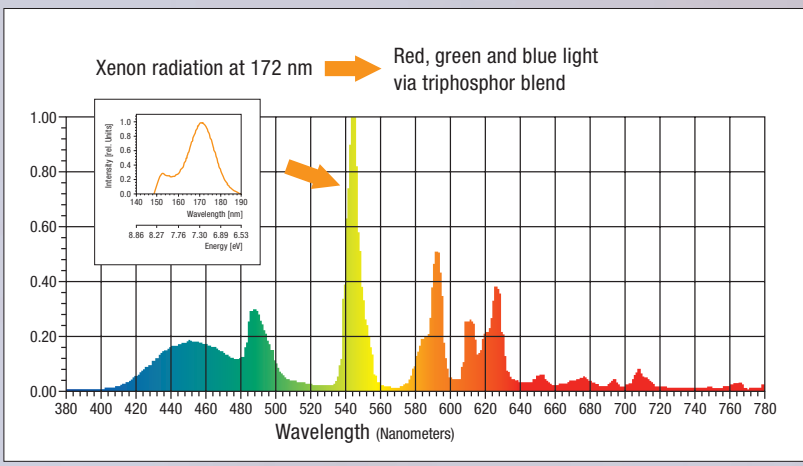
Very special advantages – for many demanding applications

Because of their many strengths, LINEX® lamps are ideal as economical and reliable light sources for a large number of different applications with distinct advantages over conventional halogen or fluorescent lamps.

LINEX® systems are available in white (triphosphor) or yellow-green (YG) and are perfect for office automation, sorting equipment, studio lighting, industrial inspection and other demanding applications, espacially in low temperature environment.



Working Principle of Internal Electrodes



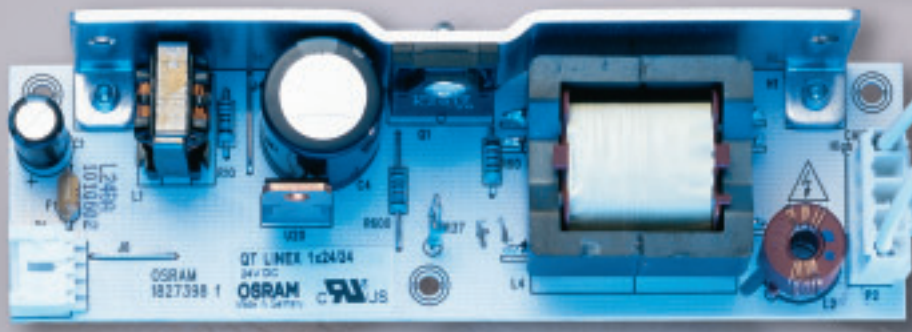
Emission Spectrum

LINEX® lighting for high speed inspection

LINEX® lamp technology offers brilliant color rendering

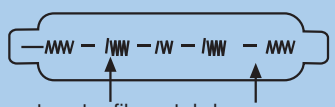
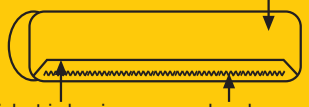
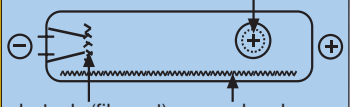
The most important advantages of LINEX® – a compact overview

- Instant light (<100 ms)
- Instant restrike
- Virtually no warm-up time
- Short persistence (< 50 ms)
- High frequency operation at >80 kHz
- No adverse effect from frequent switching cycles
- No temperature dependence for ignition and operation (–20 °C to +60 °C)
- Output virtually independent of ambient temperature
- Minimal color shift throughout lamp life
- Consistent color through an extremely wide temperature range
- Long service life of several thousand hours
- High color temperature of 5400 K
- Excellent color rendering (CRI > 90)
- Mercury-free
- Triphosphor coating system allows flexibility in lamp color
- 250% more light than conventional sinusoidally-driven xenon systems
- Mechanically robust
- High contact protection due to interior electrodes



LINEX®: Linear Excimer Lamp and Inverter System

LINEX® – Comparison with Conventional Technologies

100–500 W  	24–40 W xenon gas  	12–24 W mercury particles 
Halogen Lamp • High power consumption • Limited design variations due to filament restrictions • No instant light	**LINEX® Lamp** • Low power consumption • Instant full light output • Capable of rapid switching cycles • Mercury-free • Output independent of ambient temperature • Extremely stable color characteristics • Ideal light source for applications that need fast light switching, e.g. digital copying machines	**Mercury Fluorescent Lamp (Hot and Cold Cathode)** • High luminous efficacy • Output affected by ambient temperature • Warm-up time up to 1 minute for full output • Mercury darkens glass and phosphor over time • Special considerations required for disposal of mercury-containing lamps

Patended Technology: 26 patents granted, 11 patents pending worldwide

LINEX® system

Inverter patents	Lamp patents
Pulsed operation e. g. WO94/23442	Interior electrodes
• 250% higher brightness than sine-wave driven lamps • Efficacy of 2000 lx/W for white color • Efficacy of 4000 lx/W for YG (yellow-green)	• Higher contact safety • Lower lamp voltage • Lower “electro magnetic” interference • Smaller inverter

Global Headquarters

OSRAM GmbH
Hellabrunner Strasse 1
D-81536 München
Tel.: +49-89-62 13-0
FAX:+49-89-62 13-2020

Photo-Optic Division

OSRAM GmbH
Nonnendammallee 44-61
D-13625 Berlin
Tel.:+49-30-33 86-21 74
FAX:+49-30-33 86-23 59

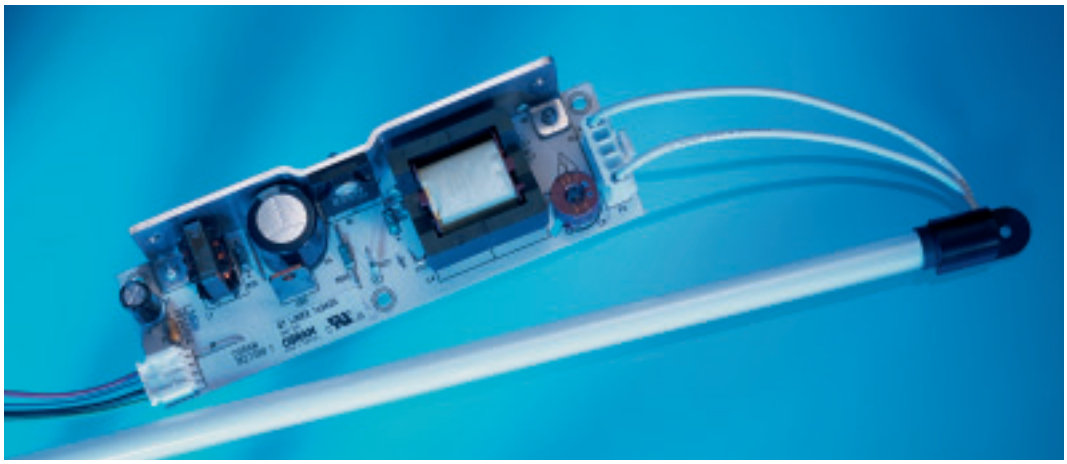
OSRAM SYLVANIA INC.

100 Endicott Street
Danvers, MA 01923
Tel.: (888) 677-2627

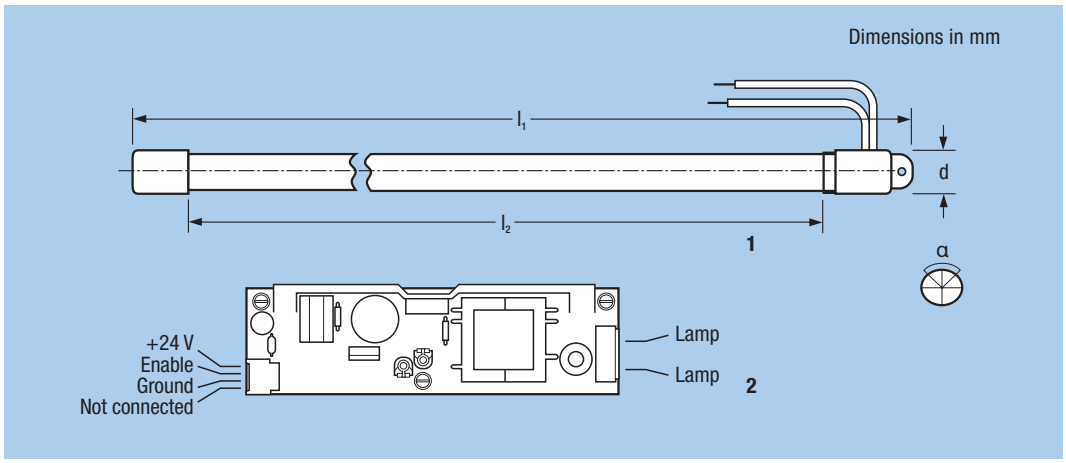
OSRAM SYLVANIA LTD.

2001 Drew Road
Mississauga, Ontario L5S 1S4
Tel: (800) 265-2852

www.osram.com
www.sylvania.com



Technical data



Lamp	LINEX A3-10W40	LINEX A4-10W24
Overall lamp length l_1	375 mm	250 mm
Emission lamp length l_2 (80% of center intensity)	310 mm	210 mm
Bulb diameter d	10 mm	10 mm
Aperture angle α	75°	75°
Illuminance at 8 mm distance*	80,000 lx	50,000 lx
Color temperature	5400 K	5400 K
Fig. no.	1	1
Suitable inverter	QT LINEX 1x40/24	QT LINEX 1x24/24

*Measured with Minolta intensity measure T-1M

Inverter	QT LINEX 1x40/24	QT LINEX 1x24/24
Supply voltage	24 V DC	24 V DC
System power consumption	40 W	24 W
Dimensions (LxWxH)	135 x 40 x 28 mm	135 x 40 x 28 mm
Fig. no.	2	2

For other lamp lengths and bases please contact us. All dimensions are subject to change without notice.
Custom colors available upon request: This product is designed to pass U.S. Federal TCLP.