

# Indoor and Outdoor Lighting 2009 | 2010

SEE THE WORLD IN A NEW LIGHT



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## Light is life.

Light is an essential part of our everyday lives. As one of the two leading lighting manufacturers in the world OSRAM offers its customers a broad spectrum of innovative lamps and lighting systems for an extremely wide range of applications in offices and factories, on the roads and in homes. OSRAM therefore provides the basis for living independent of natural daylight, with greater safety and comfort.



**A bright life on the high seas:** The AIDAdiva cruise ship – seen here in Hamburg harbor on its maiden voyage – boasts seven restaurants and eleven bars, high-end entertainment, a wellness centre and various sports facilities. On board AIDAdiva – one of the most efficient lighting management systems in the world.



### **OSRAM – a passion for intelligent light.**

A strategy of constant innovation is the key to our success. We therefore run three research centres in Beverly (USA), Munich and Regensburg. Each year, we invest around 5% of our turnover in research and development. Our global innovation management team systematically evaluates ideas for new products with enhanced customer benefits. Product development takes place close to our production sites and in close contact with customers in all the regions of the world. Our system concept plays an important role in all our innovation work to create lighting systems that are as efficient and eco-friendly as possible.



**Constant research is the key.** Major advances in pioneering thin-film technology have produced a quantum leap in the efficiency of OSRAM LEDs.

### **OSRAM – your competent and reliable partner.**

Rapid advances in lighting technology have meant that our product range has been continually expanding. To ensure that your know-how as a lighting consultant is always up-to-date we can provide you with first-class support in the form of information on the latest developments and workshops to improve your expertise. Our highly developed order processing system is the basis for a reliable delivery service – in 150 countries throughout the world.



**The Palau de Les Arts in Valencia** – one of the largest opera houses in the world. The lighting director opted for OSRAM QTi DALI control gear for its outstanding performance.

### **OSRAM – setting new standards in the quality of light.**

One of our guiding principles is to supply lighting of the highest quality. And to meet this objective our Total Quality Management team defines the quality standards that have to be met throughout the world for products, parts and components, and also the requirements for optimizing and rationalizing our processes. This is confirmed by our management system which has been certified to ISO 9001, TS 16949 and ISO 14001.

## A world fit to live in – today and tomorrow.

The consequences of global warming are already evident. The polar ice caps and glaciers are melting, sea levels are rising and deserts are expanding. The problem lies with increasing CO<sub>2</sub> emissions throughout the world. As a globally active company we are aware of our enormous responsibility toward people and their environment. This is why sustainability is the basic principle behind all OSRAM's actions. We are careful with natural resources, avoid waste wherever possible, and help reduce the greenhouse effect by developing energy-saving lamps and systems.



### **Efficient products.**

Our energy-efficient products are helping to restore the balance. By using OSRAM energy-saving lamps for example it is possible to reduce power consumption for lighting by up to 80%. At the same time, because of its long life a single compact fluorescent lamp replaces up to 15 ordinary light bulbs. OSRAM energy-saving lamps therefore not only lead to a considerable reduction in CO<sub>2</sub> emissions they help avoid waste and cut down on purchase costs and electricity costs. Innovative IRC technology is providing impressive savings in halogen lamps. And OSRAM HALOGEN ENERGY SAVER CLASSIC is a simple direct replacement for ordinary light bulbs.

### **Economical systems.**

To make lighting even more efficient we are focusing more and more on developing perfectly matched systems comprising lamps, electronic control gear and lighting management modules. Electronic operation not only ensures long life but also interference-free energy-saving operation and high-quality light. In this way, the enormous potential of our innovative lamps can be fully exploited.

# www.myOSRAM.com

## The information and shopping portal 24/7.

### Functionalities and Services.

myOSRAM saves time, makes business processes more transparent and traceable, helps optimise workflows, is simple to use, always available and can be operated with a standard web browser.

#### The core functionalities are:

##### e-catalogue

- detailed product information
- extensive search functionalities for products
- product illustration and fact sheets for download
- product innovations

##### Order

- place sales orders
- search and order directly from the e-catalogue
- use EAN or your own product/material number
- utilise order templates
- refer to quotations
- automatic upload of order files

##### Availability

- check product availability online in real time

##### Status information on all your OSRAM orders

- check order status online in real time
- check order history
- download order confirmations, delivery notes and invoices

##### Prices

- check individual prices online
- generate a complete price list (overnight processing)

##### Account statement

- check account statement online in real time

##### Administration

- administer your own users/employees
- assign logins and passwords
- decide on authorisations



### Simple

to use through intuitive operation

### Fast

through real time processing

### Convenient

from the web browser of your desktop

### 24/7

availability

### Safe

through personal login and password, individualised authorisations, SSL, frequent security audits

### Interested in using myOSRAM.com?

If you are already a registered OSRAM customer and you do not have access to myOSRAM.com yet, please contact your customer service centre representative at OSRAM.

If you are interested in Electronic Data Interchange (EDI) visit [www.osram.com/edi](http://www.osram.com/edi) or contact [CSSP.Support@OSRAM.de](mailto:CSSP.Support@OSRAM.de)

# See the world in a new light – www.osram.com.au

On the redesigned OSRAM website you can find more than just the fascinating world of light and lighting, the latest information and interesting links, you can also download various practical tools and service offerings for commercial customers and consumers.

## Focusing on your needs.

To help you find what you're looking for even faster we have reorganized the OSRAM website so it fits better with your requirements. Products for lighting professionals from the lighting professional are now all together in the PROFESSIONAL section. You will find advice, costings, business services, downloads and everything to do with training and know-how in the TOOLS & SERVICES section. Consumers can experience the entire OSRAM world of lighting in the CONSUMER section – lamps, luminaires and accessories for the home and automobile, the latest campaigns and competitions.



## Global Care on the world wide web.





**Download Centre online service.**



*The OSRAM Download Centre has been restructured so you can quickly download the information you need to your computer.*

**Web-based training online service.**

Our interactive product training program, comprising eight coordinated and clearly structured modules, is the quick stress-free way of acquiring extensive knowledge relating to light, lamps and lighting. At the end of each module you can monitor your progress by answering twelve questions. When you have successfully completed the training program we will issue you with your own personal certificate.



*More knowledge, more success:  
The online training program gives you a basic understanding on light and lighting.*

**Automotive online service.**



*Just what you were looking for: Our Lamp Replacement Guide will quickly show you which of the 400+ OSRAM vehicle lamps is the right one for the vehicle.*

# Symbols in the tables

## General lighting service lamps



Overall length in mm

## Halogen lamps



Light centre length in mm

ANSI ANSI code

## Compact fluorescent lamps



Length to IEC  $I_1$  (mm)



Max. length to IEC  $l$  (mm)



rms current in mA



Max. width in mm



Max. height in mm



Luminance in candelas per square meter

## Fluorescent lamps



Max. diameter  $d_1$  in mm



Max. diameter  $d_2$  in mm



Max. diameter  $d_3$  in mm



Length  $l_3$  in mm



Luminous flux with ECG in lumen



Luminous flux with CCG in lumen



Diameter as per IEC

## Discharge lamps



Aperture luminous flux  $b$  in lm

## Special lamps



Bulb crown



UVA radiated power 315-400nm in watts



UVB radiated power 280-315 nm in watts



UVC radiated power 100-280nm in watts

## Display and signal lamps for traffic light installations



Window  $f$  max. in mm



Test voltage

## LED modules



No. of LEDs per module



Cable cross-section/AWG in mm



Cable length in mm



Direct current



Length / Breadth / Height in mm

## Luminaires



Cut out symbol



IP rating

## Electronic control gear

CONTROL

Control



Lamp wattage in watts



System luminous efficacy



Hole spacing  $a$  in mm



Hole spacing  $a_1$  in mm



Hole spacing  $b_1$  in mm



Maximum cable length, lamp system



Part-load range



Secondary voltage



Module wattage in watts



Dimming range



Permissible battery voltage



Approval marks



Type of dimming



Number of control inputs



Number of outputs



System wattage, ECG/CCG



Ambient temperature



Max. temperature at  $T_c$  point

## Energy labeling of household lamps



Energy efficiency

## Symbols used in all chapters

<b>W</b>	Rated wattage in watts		Spacing a in mm	<b>W</b> SYSTEM	System wattage at 230 V/240 V
<b>A</b>	Rated current in amps		Width b in mm	<b>V</b> min.-max.	Permissible operating voltage, sinusoidal
<b>V</b>	Voltage in volts		Height h in mm	<b>kV</b> START	Ignition voltage in kV
<b>lm</b>	Luminous flux in lumen		Length l in mm	<b>kHz</b> EGG	Operating frequency kHz
<b>cd</b>	Luminous intensity cd		Max. length l in mm		Focal length a in mm
<b>Hz</b>	Mains frequency Hz		Length l <sub>1</sub> in mm	$\frac{LCL}{a [mm]}$	Spacing a in mm, LCL
<b>°C</b> min.-max.	Temperature range		Max. length l <sub>1</sub> in mm	$\frac{AC}{DC}$	Type of current
	Base		Length l <sub>2</sub> in mm	<b>I</b> [mA]	Rated current in milliamps
	No. Fig. no.		Max. length l <sub>2</sub> in mm	$\lambda$	Wavelength/power factor
	Shape/model		Diameter d in mm	<b>Hz</b> EGG	Operating frequency Hz
	Weight	$\varnothing d_1$ [mm]	Diameter d <sub>1</sub> in mm		Fuse, quick-acting
		$\varnothing d$ max. [mm]	Max. diameter d in mm		
			Tube diameter d in mm		
			Burning position		
			Beam angle in degrees		
		COLOR	Color		
		<b>R<sub>a</sub></b>	Color rendering group		
			Light color		
		<b>t</b> [h]	Average period of use/life		
			Normal pack/pcs.		
			Standard pack/pcs.		
			For lamp		
		<b>K</b>	Color temperature K		