Case Study

Pocan® B 4235 for lamp sockets

Figure 1: Lamp socket made of Pocan® B 4235

Material:	Pocan® B 4235
OEM:	OSRAM GmbH, Munich
Industry:	Electrical/electronics

OSRAM is one of the world's leading lighting manufacturers, and currently provides light in some 150 countries around the globe. With 88 % of its sales abroad and a marketing network on every continent, OSRAM is a true global player in lighting engineering. Its product range includes incandescent lamps, halogen lamps, fluorescent lamps, compact fluorescent lamps and high-pressure discharge lamps.

Fluorescent lamps produce around 70 % of the world's artificial light, but consume only 50 % of the energy required to do so. In fact, they need about one-fifth of the electricity consumed by an incandescent lamp. Depending on the type and mode of operation, their average life expectancy is between 5,000 and 45,000 hours, while a normal incandescent bulb lasts for about 1,000 hours.

Compact fluorescent lamps generate their light according to the same principle as normal fluorescent lamps, but by bending the glass tube, engineers have succeeded in making these lamps very compact. With the DULUX EL compact fluorescent lamp, for example, the necessary ballast is already integrated. This means it can be simply screwed into existing incandescent bulb sockets as an energy-saving lamp. As a result, the consumer can save up to 80 % electricity.

An innovative product to come from OSRAM is the "OSRAM economy lamp with photodiode". When it gets dark, it automatically switches on. Two sensors in the base of the OSRAM energy-saving lamp automatically switch the light on when it gets dark and off again when it gets light, so that no one can be accused of forgetting to switch the light off. The threshold for switching on and off is set individually via a potentiometer

The socket (available either with an E 27 or E 14 base) is made of flame-retardant Pocan B 4235 (PBT-GF30 FR), which complies with all the necessary requirements for this application:

- High heat resistance up to approx. 140 °C
- Good electrical insulating properties – the base carries current and must therefore comply with the requirements of VDE 0875 part 2.
- High dielectric strength
- Glow-wire test at 960°C at 2 mm
- UL 94 V-0 listing at a wall thickness of 1.6 mm

Pocan® is a registered trade name of LANXESS Deutschland GmbH

Disclaimer for sales products

This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided - especially that contained in our safety data and technical information sheets - and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility.

Disclaimer for developmental products

This is a developmental product. Further information, including amended or supplementary data on hazards associated with its use, may be compiled in the future. For this reason no assurances are given as to type conformity, processability, long-term performance characteristics or other production or application parameters. Therefore, the purchaser/user uses the product entirely at his own risk without having been given any warranty or guarantee and agrees that the supplier shall not be liable for any damages, of whatever nature, arising out of such use. Commercialization and continued supply of this material are not assured. Its supply may be discontinued at any time.

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions and the coloring.

Our products are sold and our advisory service is given in accordance with the current version of our General Conditions of Sale and Delivery.