



UV-LEDs for drying conformal coatings on electronic components

Fast, reliable and environmentally friendly

BELTRON, a manufacturer of high-quality plants for the industry, is successfully using Heraeus LED systems in UV driers for the efficient curing of conformal coatings on electronic components.

Based in Rödermark, BELTRON GmbH develops and produces plants, machines, and devices for the graphical industry and numerous other industries. BELTRON has asserted itself in many markets and the products are used in the most varied industries, including the UV drying of adhesives, in medical technology, in the automotive and electronics industry and for the processing of furniture and wood. The company provides its products from one source, i.e. from planning to designing, from production to assembly all planning and production steps take place at BELTRON. Together with the customer, the company also develops exclusive special constructions to satisfy extraordinary customer requirements.

For the development of the BEK LED 3WI LED UV drier, developed as a customer-specific device, the company is using Heraeus UV LED systems and is convinced of their quality and price-performance ratio. The LED UV drier is an "isolated application", so it can be used flexibly and is unique at BELTRON. Moreover, it has the advantage that inlet and outlet can be operated by just one person. The LED UV chain conveyor is used for conformal coating applications. With this method for the drying and curing of coatings, used in particular in the electronics industry, coatings of electronic components are cured within seconds with UV LED radiation. The components can immediately be processed further and UV curing makes them especially resistant to environmental impact such as temperature and moisture.

The newly developed LED UV chain conveyor dries all UV LED reactive materials such as thick-film protective varnishes, adhesives, cast resins, and UV-curing paints. The applied UV LED technology, which uses semiconductor-based LEDs to generate ultraviolet light, is a tried and tested, more environmentally friendly and more efficient alternative to conventional mercury-containing UV lamps.

BELTRON relies on the advantages of the UV LED technology with maximized performance, reliability, and UV light and Heraeus is a reliable cooperation partner for the production of the UV LED systems.



LED UV chain conveyor, exterior view
Photo: BELTRON GmbH



LED UV chain conveyor, interior view
Photo: BELTRON GmbH

Features

- Individual width and height adjustment
- Electronically controlled cooling system
- PLC computer control for monitoring and controlling all machine functions
- Flexible transport speed control depending on production cycle and required UV dose

Technical data

- Wavelength: 365 nm oder 395 nm
- UV LED output: 1-12 W/cm²
- Exposure width: up zu 240 mm

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