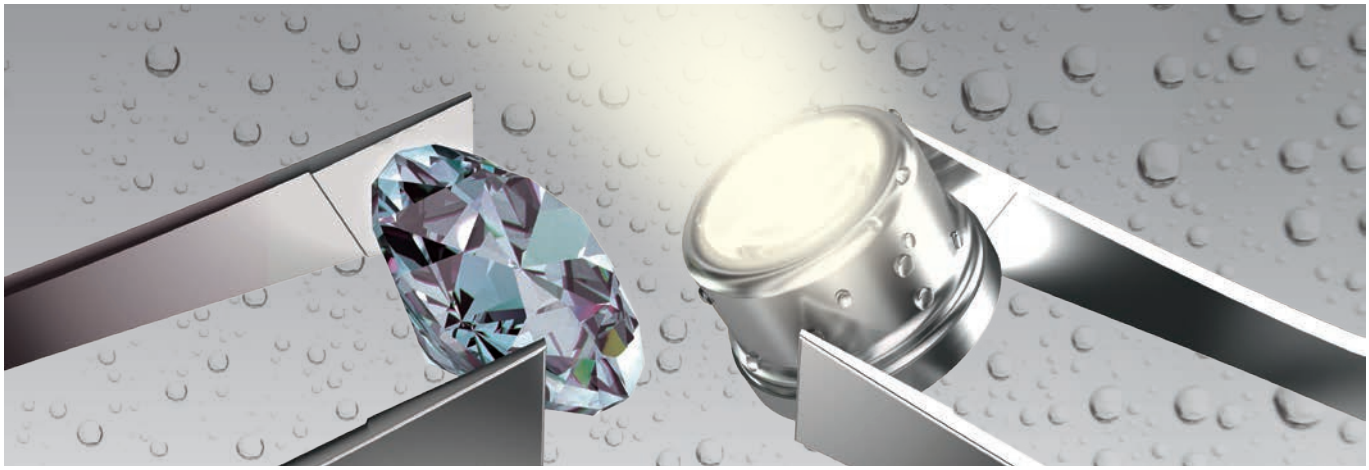
SCHOTT Solidur® Mini LED

The world's smallest fully autoclavable HB LED for Medical and Dental Devices



Ultra small, ultra robust, ultra brilliant: SCHOTT Solidur® Mini LED

Product Information

The SCHOTT Solidur® Mini LED is the world's smallest hermetic and therefore fully autoclavable High Brightness (HB) LED available in the market today. Owing to its gas-tight housing design based on inorganic, non-aging materials, the Mini LED is extremely robust, resistant tochemicals, corrosion and pressure – even at varying temperatures.

This makes the SCHOTT Solidur® Mini LED a highly reliable light source, performing efficiently over a long time period and over many autoclaving cycles. The Mini LED can easily be incorporated into medical devices as it is available as a connectorized format as well as in SMD design.

Applications

The SCHOTT Solidur® Mini LED is suitable for applications in medical and dental lightening, especially for devices that need autoclaving. Typical applications include dental turbines, cameras, UV curing devices, endoscopes, laparoscopes, laryngoscopes, otoscopes, surgical equipment and many more. With the Mini LED, doctors can bring the light source close to the patient and significantly increase the illumination (light situation) of a difficult to reach area during surgical operations or medical check-ups.

Thanks to its robust and miniaturized design, the Solidur® Mini LED enables medical devices that in the past had to function without light due to design limitations or autoclaving requirements. With the Mini LED, medical device designers can now implement an autoclavable light source directly into the device.

Surgical instrumentste

Otoscopes

Turbines

Turbines

Ophthalmoscopes

Mirrors

Cameras

Hand tools

Tools

UV devices

SCHOTT

glass made of ideas

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Features

- Color temperature C_T: 3000-6000K (warm, neutral to cold white)
- Color rendering index R_a: 65-92
- Forward current I_F: typ. <700 mA
- Luminous flux ϕ_V: typ. 5-20 lm at I_F = 150 mA
- Colored LEDs on request
- Forward voltage V_F: typ. 3.4V at I_F = 150 mA
- Viewing angle Full Width Half Maximum (FWHM) Θ_V: typ. 30 – 120°
- Layout for single chip
- Size: ∅ ≥ 1.9 mm
- Height: > 1.7 mm
- Lens material: refractive index 1.5 < n < 1.84

Advantages

- The SCHOTT Solidur® Mini LED can be adapted to your application and requirements:
  - Choose your light color
  - Define your color temperature and CRI
  - Define your radiation pattern
  - Customize your optical properties like luminous flux and lens
- Fully autoclavable, highly reliable light source
- Small size
- Easy to integrate due to electrical interface:
  - Surface Mount Design (SMD)
  - Pigtail
  - Connectorized/Through-hole
- Good thermal management
- Non-aging glass lens with high chemical resistance

Technical Concept

- SMD ceramic package with metal cap
- Inorganic, non-aging materials
- Single chip package
- High corrosion robustness
- Low thermal resistance
- Available as white light or colored LED

Customized white light and color temperature

About SCHOTT Electronic Packaging

SCHOTT is an international technology group with more than 130 years of experience in the areas of specialty glasses and materials.

More than 600 scientists and engineers are working for and with SCHOTT customers all over the world, while setting the pace by developing new, cutting edge technologies for the requirements of today and tomorrow.

The SCHOTT Group with a workforce of about 15,400 employees maintains close proximity to its customers with manufacturing and sales units in 35 different countries.

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