

**MORE LIGHT**

## Chips and Light Emitting Diodes

The Jenoptik Industry business unit offers chips and LEDs from 360 nm to 1750 nm, which show very low variation of optical and electrical parameters, high degradation stability and efficiency.

Our LEDs are available in various housing designs. In addition to the common 5 mm or 3 mm plastic housings, SMDs in 1206-, 0805- and PLCC-housings are also available.

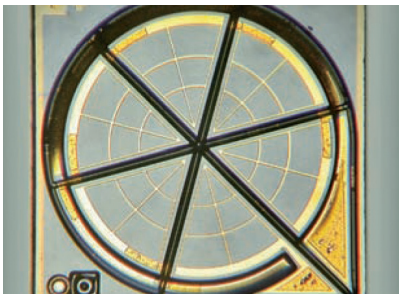
Housing, beam radiation distribution, wavelength and optical power can be adjusted and varied to meet customer's needs. Infrared LEDs are also available with switching times of 10 ns. Furthermore, TO cans for high reliability and high temperature range are also available for assembly.

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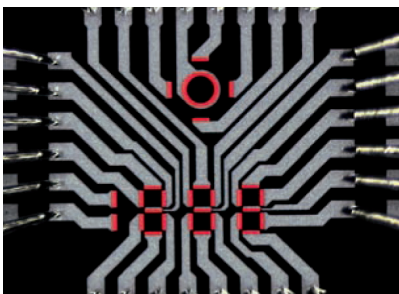
### Standard chips and LEDs from 360 nm up to 1750 nm

- With low variation of optical and electrical parameters
- 100% chip testing and logging of data as peak wavelength, intensity, output power, forward voltage at different currents
- Sorting in accordance with special wavelength or output power requirements
- Various housings (3 mm, 5 mm, SMDs, TO-packages, COB) to meet customer's needs perfectly



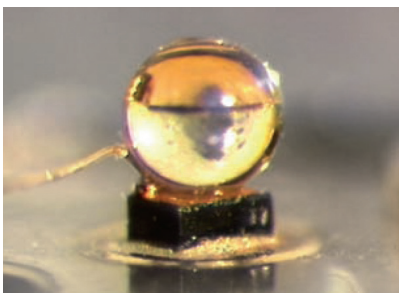
### Custom designed chips

- For high power applications with chip size 1 mm x 1 mm or larger
- With special layouts for optical requirements
- COB systems with integrated lenses
- Measurement and sorting in accordance with customer's needs
- Special features like wavelengths and rise and fall time



### Monolithic display chips for cameras, microscopes and range finders

- Segmented LED-chips for letters and numbers
- Symbols such as dots, rings, lines, arrows, crosses
- Technology: red illumination at 650 nm from GaAsP / GaAs
- Minimum character size of 20  $\mu\text{m}$
- Chip on board solutions



### Point source LED chips

- With well defined diameter ( $\varnothing$  8, 25, 50 and 150  $\mu\text{m}$ )
- For precise imaging of radiation area
- No edge radiation, no disturbance, wire bond is outside of emitting point
- Used in miniature light barriers with ball lens mounted on emitting area
- Available wavelength in visible (650 nm) and infrared range (850 nm)

### Certification according to DIN EN ISO 9001, ISO 13485, ISO 14001, IATF 16949

Surface-emitting semiconductor light-emitting diode: Patent in US, TW: US 8847241 B2, TW435045 | Pending Patent in EP, JP, CN, KR  
Registered Utility model in DE202011000758 | It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.