

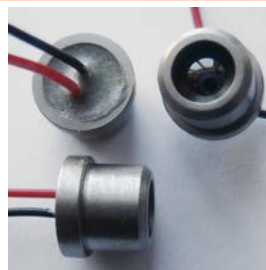
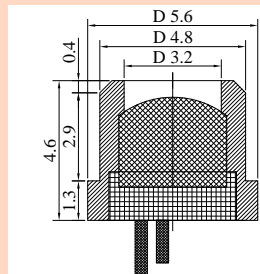
Optically Immersed 1.95 μm LED in heat-sink optimized housing

LED19Su, LED19Sr

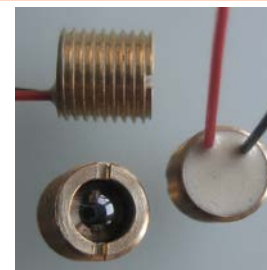
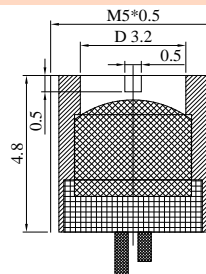
Peak wavelength λ_{max}	μm	1.9	
Pulse power P_{pulsed}	mW	Drive current 1 A, 2 % duty cycle	6
Quasi-CW power P_{QCW}	mW	Drive current 0.4 A, 50% duty cycle	2
CW power P_{CW}	mW	Drive current 0.2 A	0.6

Code	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Optical axis deviation, deg.	Optical power deviation, %	Operation conditions, °C	Lifetime, hrs	Polarity
LED19Su/Sr	\varnothing 3.2	Si	\sim 15	\leq 5	\pm 25	-25 \pm +60	>80 000	Red wire – positive, Black wire – negative

Product view



LED19Su



LED19Sr

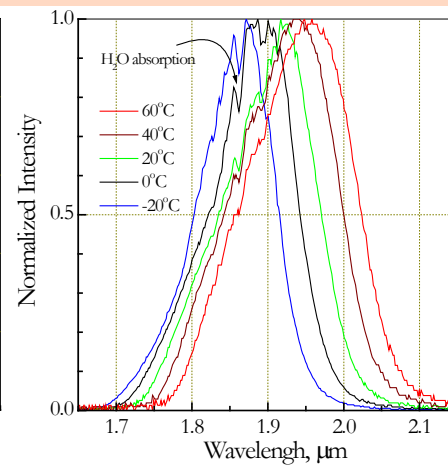
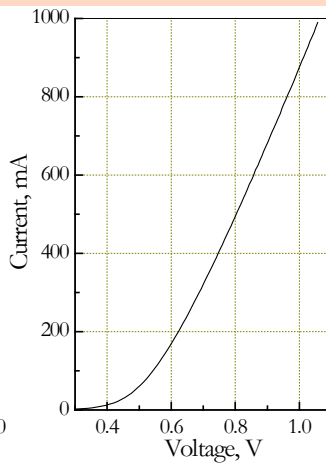
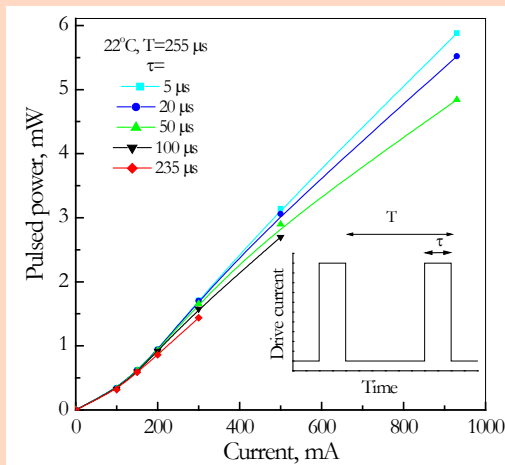
Features

Growth of narrow gap semiconductor alloys onto n⁺-GaSb substrate; Flip-chip design of LEDs; Optical coupling through the use of chalcogenide glasses and Si lenses with antireflection coating

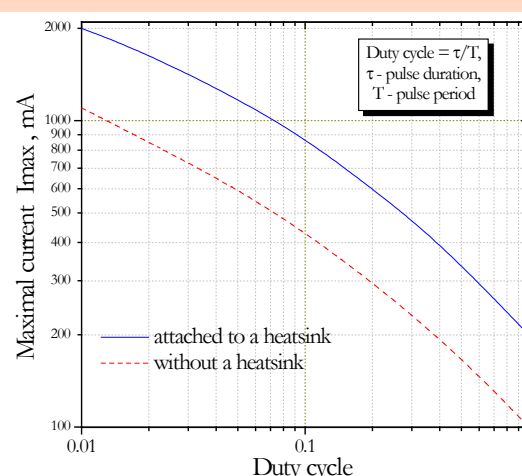
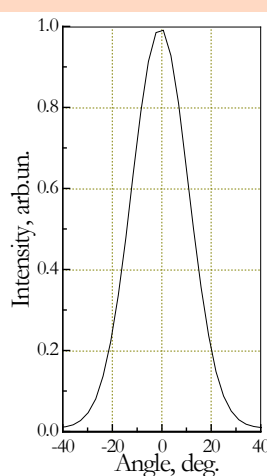
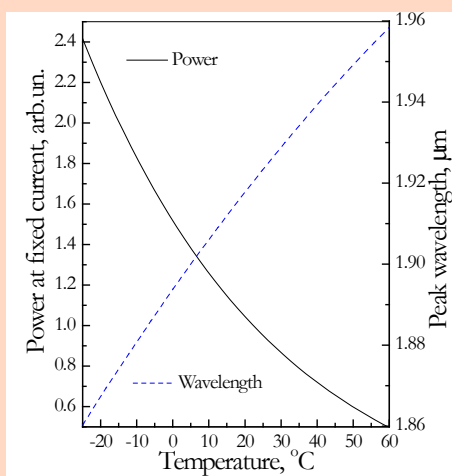
3-fold increased LED output power; Beam collimation within \sim 15 deg; Low serial resistance; Small on-off time (tenths of ns); Low power consumption (\leq 0.1 W)

Emission beam divergence is small and thus we recommend adjusting LED position regarding to the detector system before final evaluation/use of the devices. We recommend if possible using low duty cycle mode of operation with $I < 0.5 \times I_{\text{max}}$ so that higher efficiency and long term stability of a LED are achieved. **Data are valid for 22°C and LED attached to a heatsink.** Heatsink is important for LED operation especially in the CW mode.

I-V and I-V characteristics and emission spectra



Output power and peak wavelength vs temperature, far-field pattern and maximal current vs operation conditions



Product specifications are subject to change without prior notice due to improvements or other reasons. Updated 21.09.18