

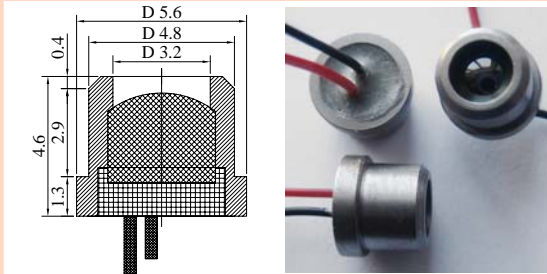
# Optically Immersed 2.15 $\mu\text{m}$ LED in heat-sink optimized housing

# LED21Su, LED21Sr

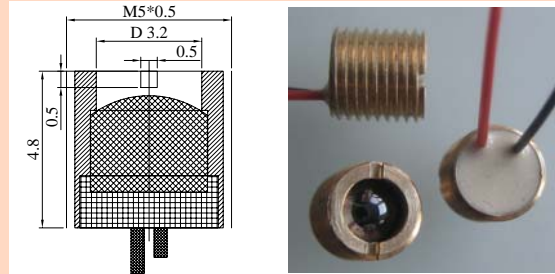
Peak wavelength $\lambda_{\text{max}}$	$\mu\text{m}$	2.15	
Pulse power $P_{\text{pulsed}}$	mW	Drive current 1 A, 2 % duty cycle	10
Quasi-CW power $P_{\text{QCW}}$	mW	Drive current 0.4 A, 50% duty cycle	3
CW power $P_{\text{CW}}$	mW	Drive current 0.2 A	1.2

Code	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Optical axis deviation, deg.	Optical power deviation, %	Operation conditions, °C	Lifetime, hrs	Polarity
LED21Su/Sr	$\varnothing$ 3.2	Si	~15	$\leq 5$	$\pm 25$	-25÷+60	>80 000	Red wire – positive, Black wire – negative

Product view



LED21Su



LED21Sr

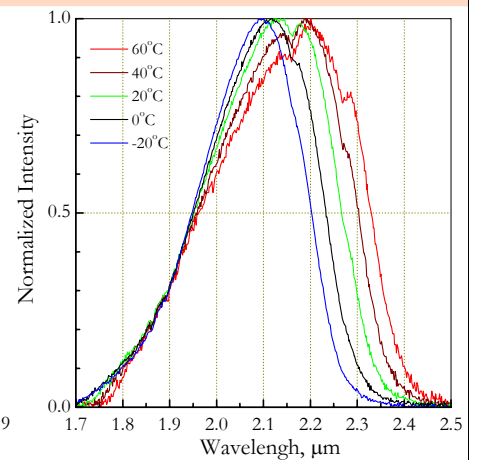
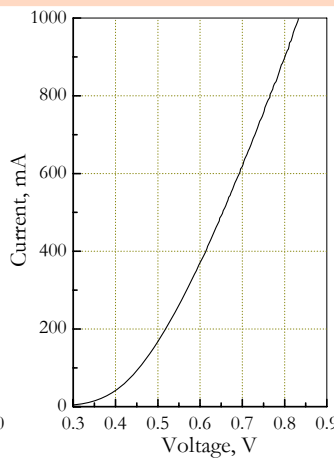
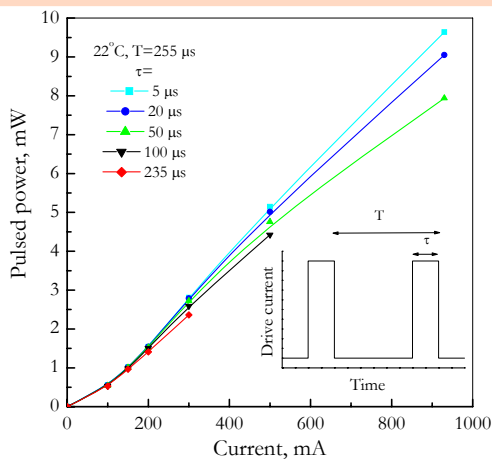
Features

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

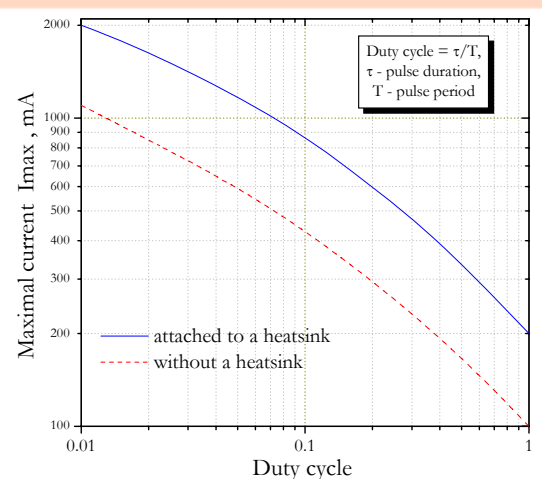
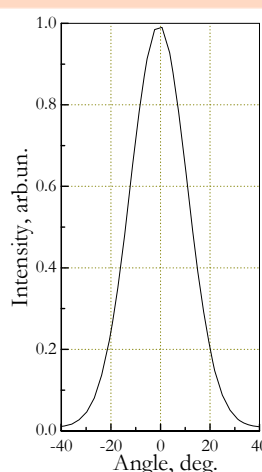
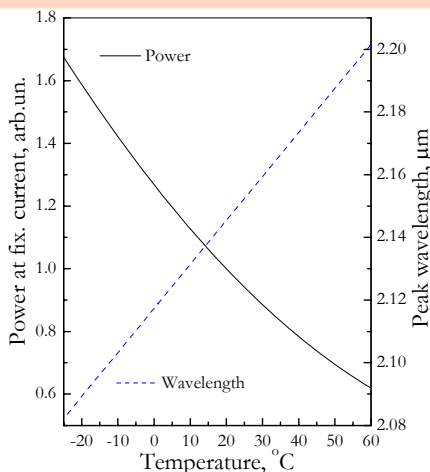
3-fold increased LED output power; Beam collimation within ~15 deg; Low serial resistance; Small on-off time (tenths of ns); Low power consumption ( $\leq 0.1$  W)

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.

L-I 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 14.10.11



ООО «Июффе ЛЕД»  
Ioffe LED, Ltd

Politechnicheskaya 26,  
St.Petersburg, 194021, RUSSIA

<http://www.ioffled.com>  
e-mail: Mremenny@mail.ioffe.ru  
Tel./fax: +7 812 297 7446