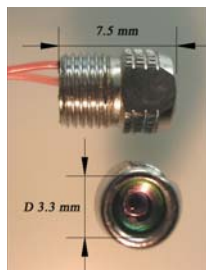
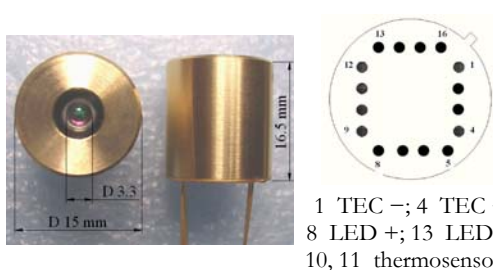
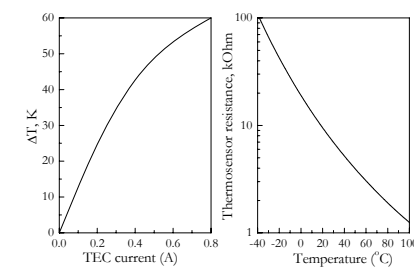
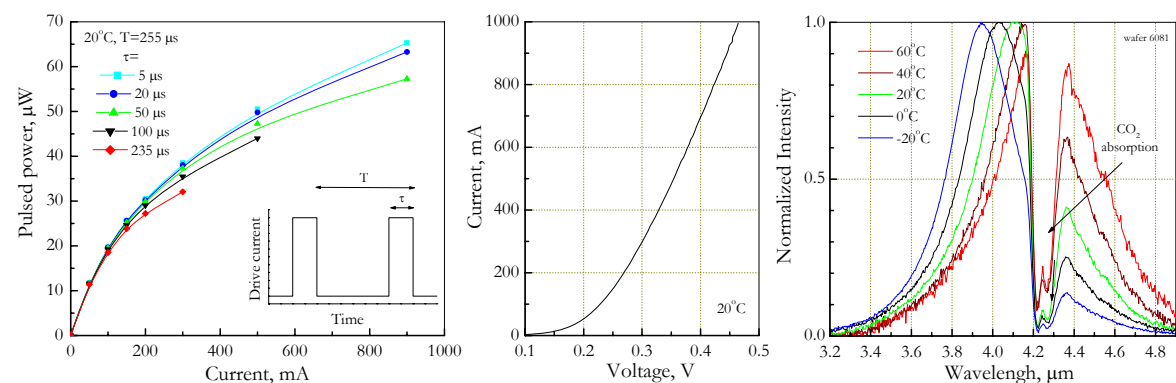


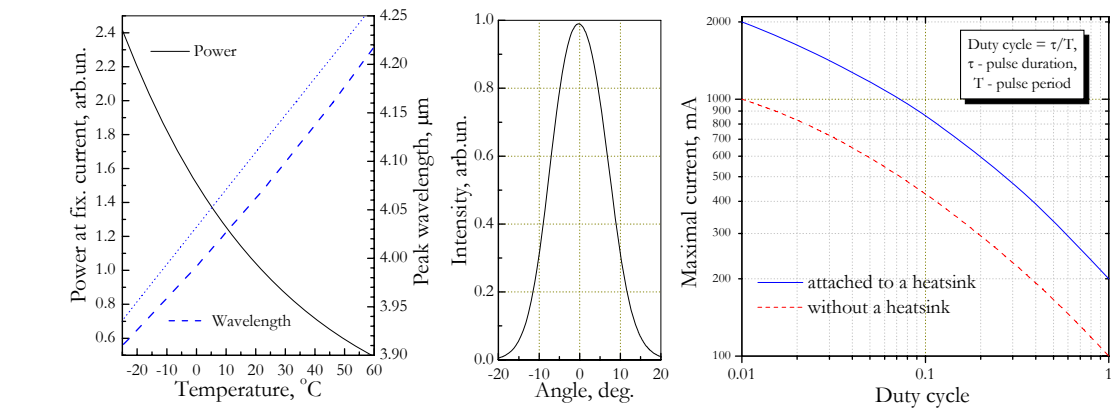
Optically Immersed 4.2 μm LED in heat-sink optimized housing				LED42Sc
Peak wavelength	λ_{max}	μm		4.2 \pm 0.1
Pulsed power at I=1 A	P_{pulsed}	μW		70 \pm 15
CW power at I=200 mA	P_{CW}	μW		25 \pm 5
Switching time	τ	ns		\leq 20

Code	Thread	Emission size, mm	Lens material	Far-field pattern FWHM, deg.	Optical axis deviation, deg	Operation (storage) conditions, $^{\circ}\text{C}$
LED42Sc	M5 \times 0.5	\varnothing 3.3	Si	\leq 20	\leq 7	-25 \div +60 (+80)
LED42TO8TEC			Si lens and quartz window			

	LED42Sc	LED42TO8TEC
Product view		 <p>1 TEC -; 4 TEC + 8 LED +; 13 LED - 10, 11 thermosensor</p> 

- ✓ All devices are stressed at 80 $^{\circ}\text{C}$ (I=0) and I=200 mA (CW, 20 $^{\circ}\text{C}$) for 10 hrs before final test and shipping to a customer.
- ✓ Beam divergence of the LEDs is small and thus we recommend adjusting LED position regarding to the detector system before final evaluation/use of the devices.
- ✓ All data are valid for room temperature (22 $^{\circ}\text{C}$) and LED attached to a heatsink. Heatsink is important for normal LED operation especially in the CW mode.
- ✓ Polarity: short wire is negative or white point on house is positive

Output power vs. current, current-voltage curve and emission spectra
 <p>20$^{\circ}\text{C}$, T=255 μs $\tau =$ 5 μs 20 μs 50 μs 100 μs 235 μs</p> <p>Normalized Intensity vs Wavelength, μm. Curves for 60$^{\circ}\text{C}$, 40$^{\circ}\text{C}$, 20$^{\circ}\text{C}$, 0$^{\circ}\text{C}$, -20$^{\circ}\text{C}$. wafer 6081. CO₂ absorption.</p>

Output power and peak wavelength vs. temperature, far-field pattern and maximal current vs. operation conditions
 <p>Power at fix. current, arb.un. vs Temperature, $^{\circ}\text{C}$. Wavelength vs Temperature, $^{\circ}\text{C}$.</p> <p>Intensity, arb.un. vs Angle, deg.</p> <p>Maximal current, mA vs Duty cycle. Legend: attached to a heatsink (solid blue line), without a heatsink (dashed red line). Duty cycle = τ/T, τ - pulse duration, T - pulse period.</p>