

LIGHT EMITTING DIODES 1.6÷4.6 μm

Model LED18-TEC

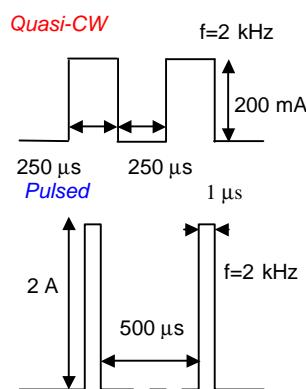
1.85 mm 0.9 mW

- Light Emitting Diodes **LED18-TEC** are designed for emitting at a spectral range around 1850 nm. Thermocooler and thermoresistor are mounted inside 9 mm package TO-5. Heterostructures (HS) are grown on GaSb substrates
- Light Emitting Diodes **LED18-TEC** are developed for using in optical gas sensors and medical diagnostics. Such construction gives possibility for temperature stabilization of LED parameters. Lifetime is more than 10000 hours.
- Related products: **LED18** can be used in optical pair with our photodiodes **PD24**. Our standard **LED Driver** provides power supply of **LED18-TEC** in two recommended here regimes (Quasi-CW and Pulsed).



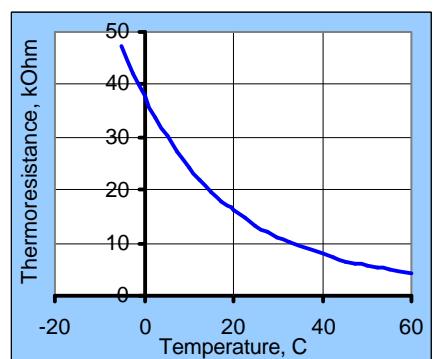
Parameters	Min	Typ	Max
Wavelength, μm	1.80	1.85	1.89
FWHM, μm	0.15	0.20	0.25
Optical Power, μW	0.7	0.9	1.1
Quasi-CW @ 200 mA	15	20	25
Pulsed@2A	10	30	50
Switching Time, ns			
Range of temperature control °C	-10÷+60		
Emitting Area, μm^2	300x300		
Soldering temperature	95 °C		
Package	TO-5 with thermocooler and thermistor		

Recommended regimes of LED operation

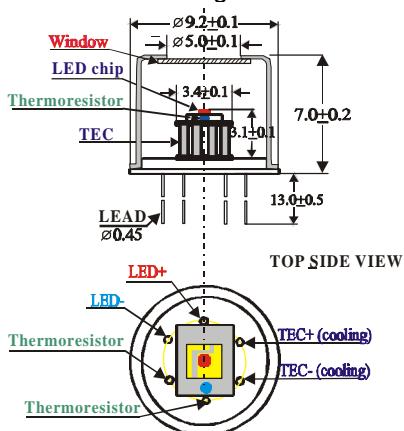


Main thermocooler parameters (without load)

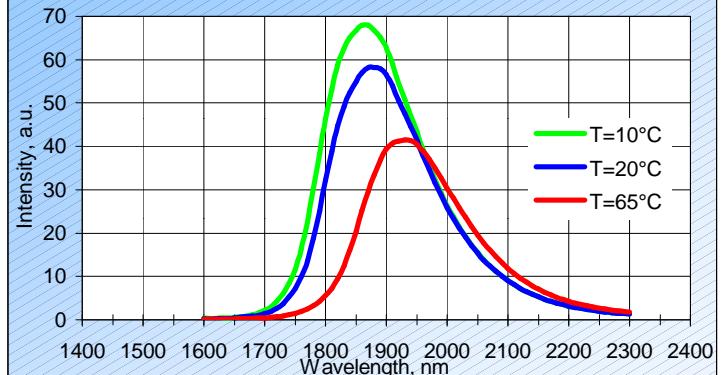
I_{\max} (Amps)	Q_{\max} (Watts)	U_{\max} (Volts)	ΔT_{\max} °C
0.7	0.4	1.0	67



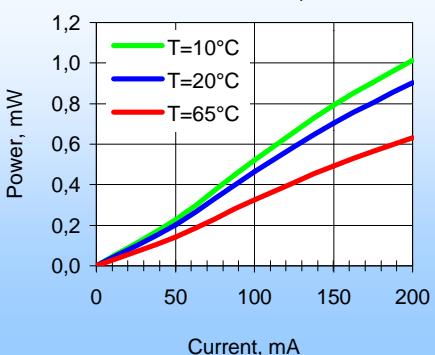
Package TO-5



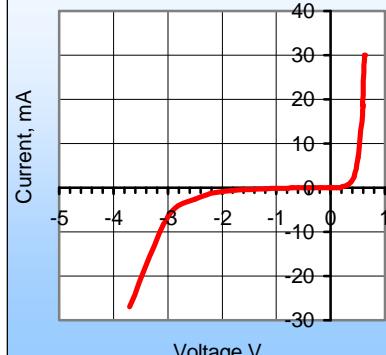
LED18 typical spectra at different temperatures



LED18 - typical power vs. current characteristic at different temperatures



LED18 - typical Current-voltage characteristic



Far field pattern with and without reflector

