



LED21-TEC-PR



TECHNICAL DATA

Mid-Infrared Light Emitting Diode

Light Emitting Diodes with central wavelength 2.15 μm series are based on heterostructures grown on GaSb substrates. They are developed for using in optical gas sensors and medical diagnostics. LED21-TEC-PR has a stable output power and a lifetime more than 80000 hours.

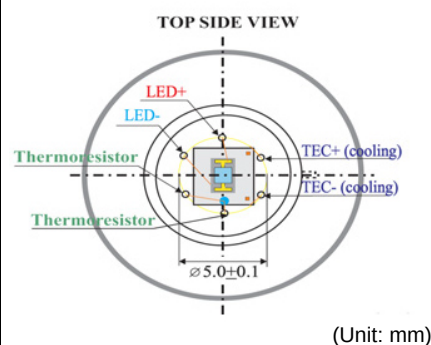
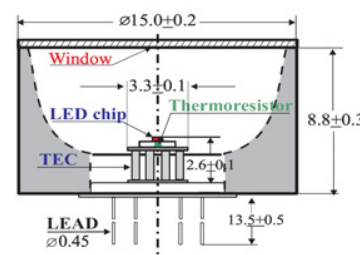
Features

- Structure: GaInAsSb/AlGaAsSb
- Peak Wavelength: typ. 2.15 μm
- Optical Output Power: typ. 1.1 mW qCW
- Package: TO-5, with TEC, thermistor, PR and window



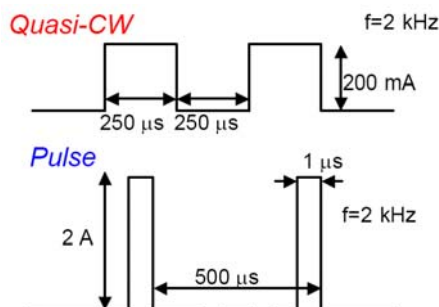
Specifications

Item	Condition	Min.	Rating Typ.	Max.	Unit
Peak Wavelength	T=300 K	2.10	2.15	2.19	μm
FWHM	150 mA CW	150	200	250	nm
Quasi-CW Optical Power	200 mA qCW	0.9	1.1	1.3	mW
Pulsed Optical Power	1 A	25	28	30	mW
Switching Time	T=300 K	10	30	50	ns
Operation Voltage	200 mA qCW				V
Operating Temperature	-240 ... +50				$^{\circ}\text{C}$
Emitting Area	300x300				μm
Soldering Temperature	180				$^{\circ}\text{C}$
Package	TO-5, with built-in thermocooler, thermoresistor, parabolic reflector and quartz window				



(Unit: mm)

Operating Regime



Quasi-CW

- Maximum current 220 mA
- Recommended current 150-200mA

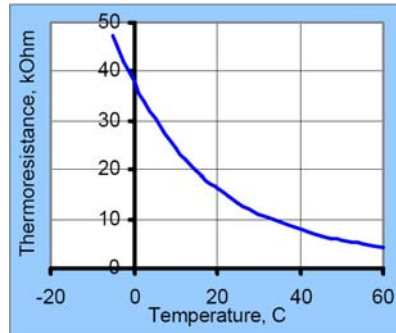
Pulsed

- Maximum current 1 A (puls length 500 ns, repetition rate 2kHz)

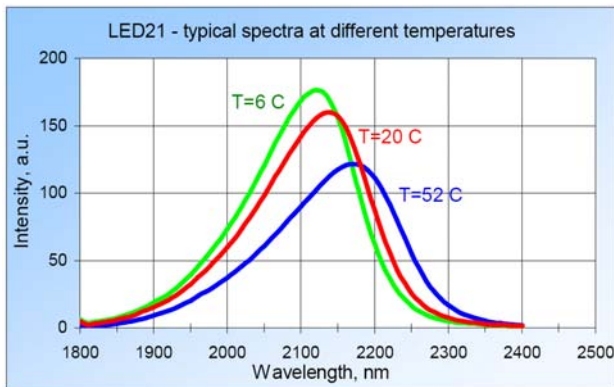


Main Thermocooler Parameters (without load)

$I_{\max}$	0.7 A
$Q_{\max}$	0.4 W
$U_{\max}$	1.0 V
$\Delta T_{\max}$	67 °C



Typical Performance Curves



Far field pattern with and without reflector

