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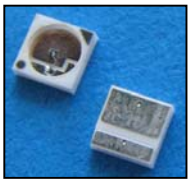
LED20-SMD3



TECHNICAL DATA

Mid-Infrared Light Emitting Diode, SMD

Light Emitting Diodes with central wavelength 2.05 µm series are based on heterostructures grown on GaSb substrates. Solid solutions GaInAsSb are used in active layer. Wide band gap solid solutions AlGaAsSb with Al content 64% are used for good electron confinement.
LED20-SMD3 has a stable ouput power and a lifetime more then 80000 hours.

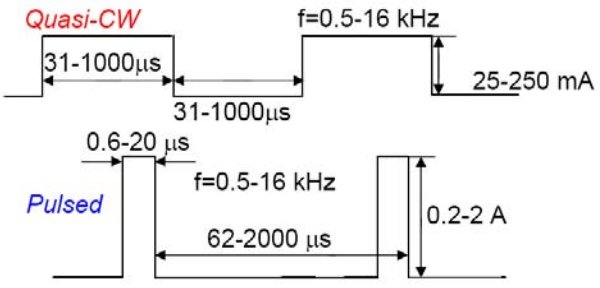
Features

- Structure: GaInAsSb/AlGaAsSb
- Peak Wavelength: typ. 2.05 µm
- Optical Ouput Power: typ. 1.0 mW qCW
- Package: SMD 3x3 mm

Specifications

Item	Condition	Rating			Unit
		Min.	Typ.	Max.	
Peak Wavelength	T=300 K	2.02	2.05	2.07	µm
FWHM	150 mA CW	150	200	250	nm
Quasi-CW Optical Power	200 mA qCW	0.8	1.0	1.2	mW
Pulsed Optical Power	1 A	20	25	30	mW
Switching Time	T=300 K	10	20	30	ns
Operation Voltage	200 mA qCW				V
Operating Temperature	-240 … +50				°C
Emitting Area	300x300				µm
Soldering Temperature	180				°C
Package	SMD type package 3x3 mm based on high thermal conductivity ceramics				

Operating Regime



Quasi-CW

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

Pulsed

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

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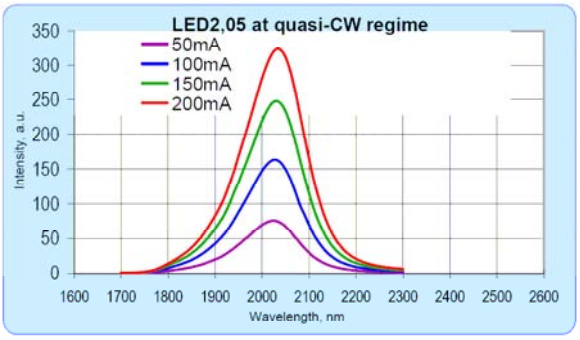
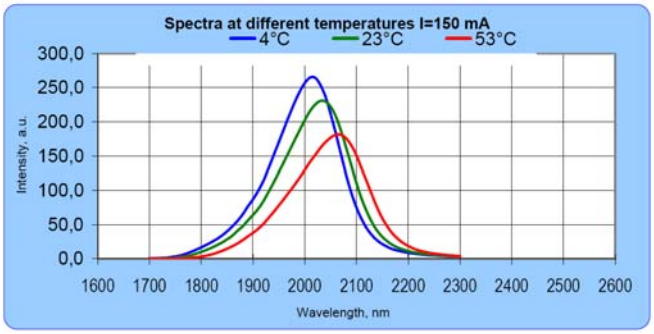
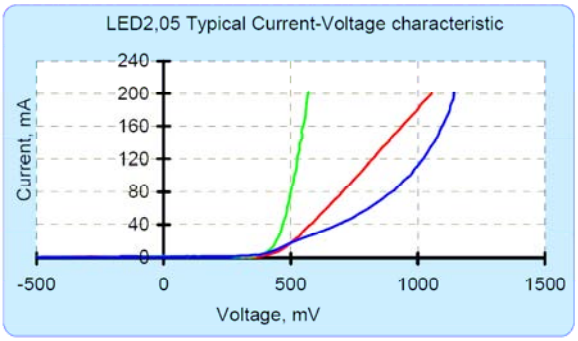
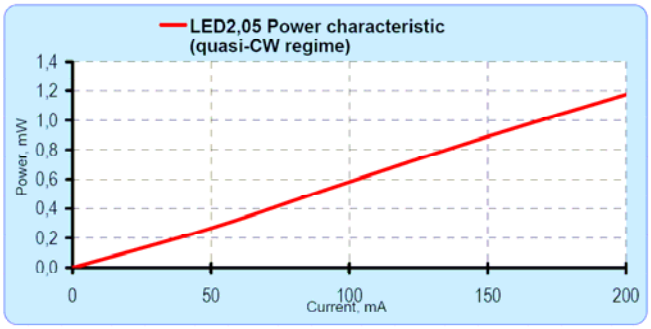
Typical Performance Curves

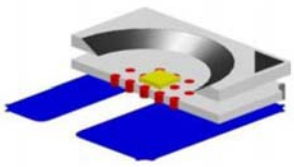


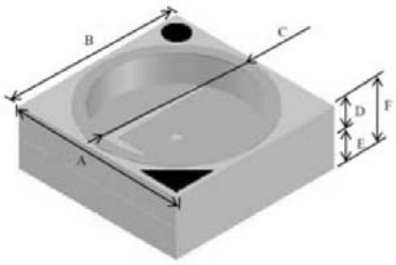






Package





ITEM	Symbol	Rule
Basic Outline	A	3.0± 0.1mm
Basic Outline	B	3.0± 0.1mm
Cavity size	C	Max 2.4Φ
Top layer	D	Min 0.4mm
Bottom layer	E	Min 0.4mm
Thickness	F	Max 2mm

- Tiny package for surface mounting
- Anode and cathode are led to the metalized areas on the back side of the ceramic surface
- Material – Low Temperature Co-fired Ceramic (LTCC):
  - thermal conductivity 25 W/mK
  - thermoresistance 8 °C/W