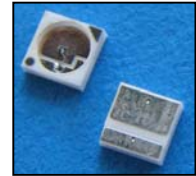




## LED34-SMD3



### TECHNICAL DATA

### Mid-Infrared Light Emitting Diode, SMD

Light Emitting Diodes with central wavelength 3.40  $\mu\text{m}$  series are based on heterostructures grown on InAs substrates by MOCVD. InAsSb is used in the active layer. Wide band gap solid solutions InAsSbP with P content 50% are used for good electron confinement. LED50-SMD3 has a stable output power and a lifetime more than 80000 hours.

#### Features

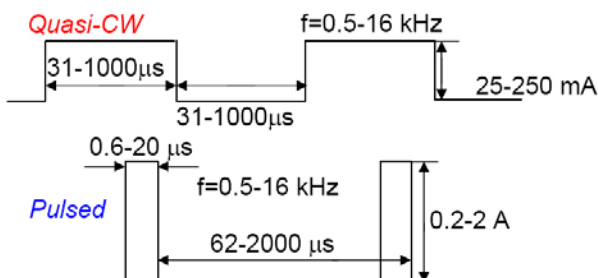
- Structure: InAsSb/InAsSbP
- Peak Wavelength: typ. 3.40  $\mu\text{m}$
- Optical Output Power: typ. 35  $\mu\text{W}$  qCW
- Package: SMD 3x3 mm



#### Specifications

Item	Condition	Rating			Unit
		Min.	Typ.	Max.	
Peak Wavelength	T=300 K	3.32	3.40	3.46	$\mu\text{m}$
FWHM	150 mA CW	400	500	600	nm
Quasi-CW Optical Power	200 mA qCW	25	35	45	mW
Pulsed Optical Power	1 A	320	400	480	mW
Switching Time	T=300 K	10	20	30	ns
Operation Voltage	200 mA qCW				V
Operating Temperature		-240 ... +50			$^{\circ}\text{C}$
Emitting Area		300x300			$\mu\text{m}$
Soldering Temperature		180			$^{\circ}\text{C}$
Package	SMD type package 3x3 mm based on high thermal conductivity ceramics				

#### Operating Regime



#### Quasi-CW

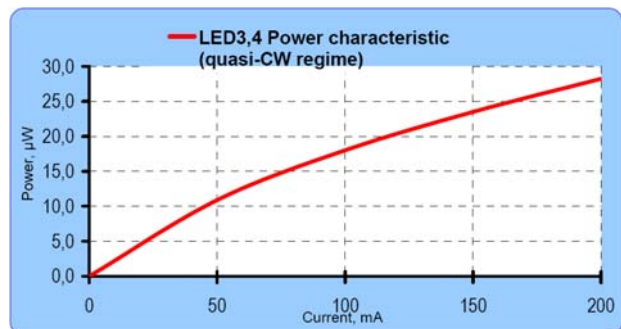
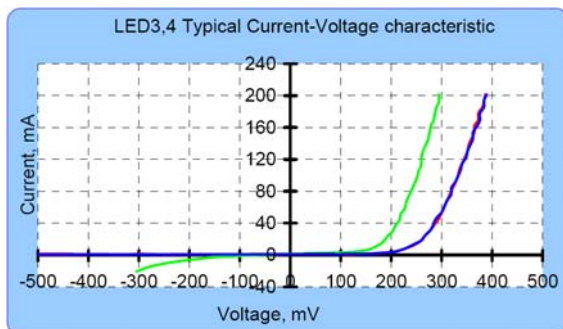
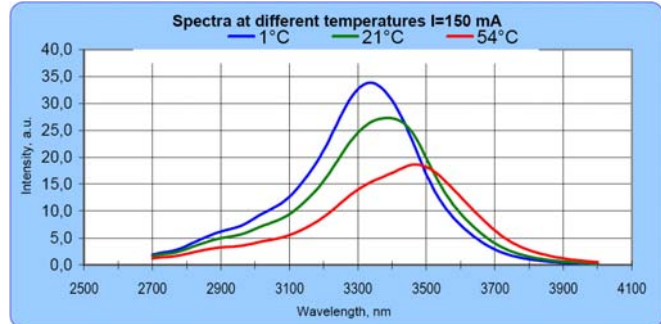
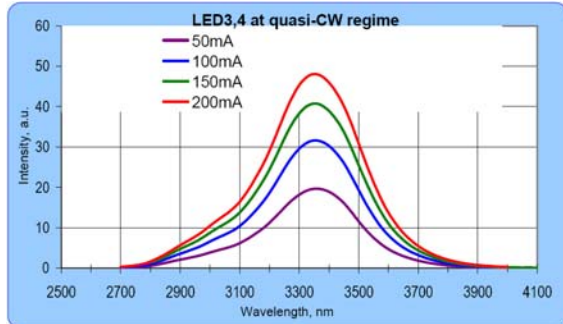
- Maximum current 220 mA
- Recommended current 150-200mA

#### Pulsed

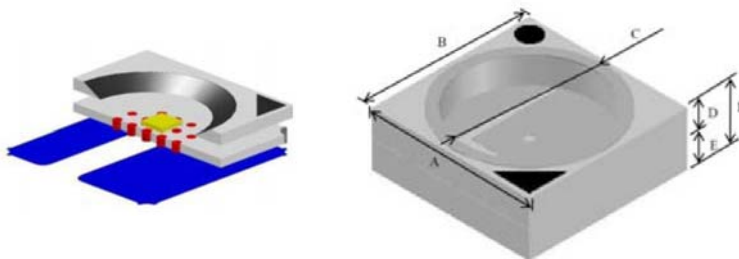
- Maximum current 1 A (puls length 500 ns, repetition rate 2kHz)



## 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