

# LED36-SMD5R



# **TECHNICAL DATA**

# **Mid-Infrared Light Emitting Diode, SMD**

Light Emitting Diodes with central wavelength 3.65 µm 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.

LED36-SMD5R has a stable ouput power and a lifetime more then 80000 hours.

# Features

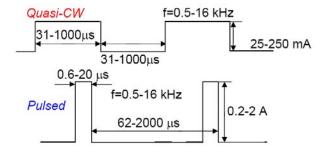
- Structure: InAsSb/InAsSbP
- Peak Wavelength: typ. 3.65 µm
- Optical Ouput Power: typ. 30 µW qCW
- Package: SMD 5x5 mm with microreflector



ltem	Condition	Rating			Unit
		Min.	Тур.	Max.	Unit
Peak Wavelength	T=300 K	3.60	3.65	3.70	μm
FWHM	150 mA CW	0.40	0.50	0.60	μm
Quasi-CW Optical Power	200 mA qCW	20	30	40	μW
Pulsed Optical Power	1 A	180	200	220	μW
Switching Time	T=300 K	10	20	30	ns
<b>Operation Voltage</b>	200 mA qCW				V
Operating Temperature	-240 +50				°C
Emitting Area	300x300				μm
Soldering Temperature	180				°C
Package	SMD type package 5x5 mm based on high thermal conductivity ceramics with microrefl				

# Specifications

# **Operating Regime**



#### Quasi-CW

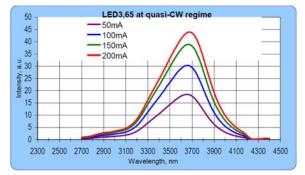
- Maximum current 220 mA
- Recommended current 150-200mA

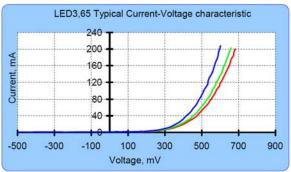
#### Pulsed

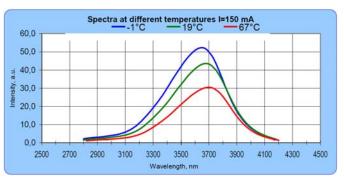
 Maximum current 1 A (puls lenght 500 ns, repetition rate 2kHz)

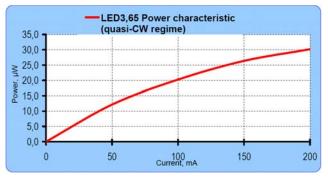


### **Typical Performance Curves**









# Package



- 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
- Microreflector provides the reduction of radiation divergence