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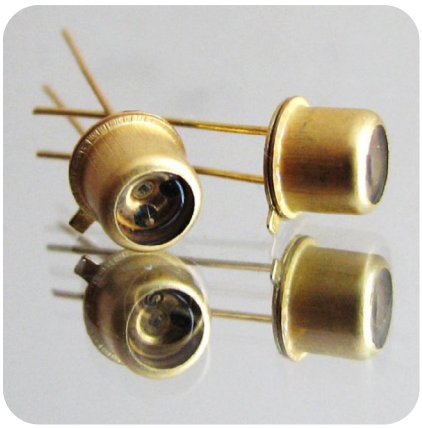
LED Microsensor NT

Mid-Infrared Light Emitting Diode

2,30 - 2,39 µm

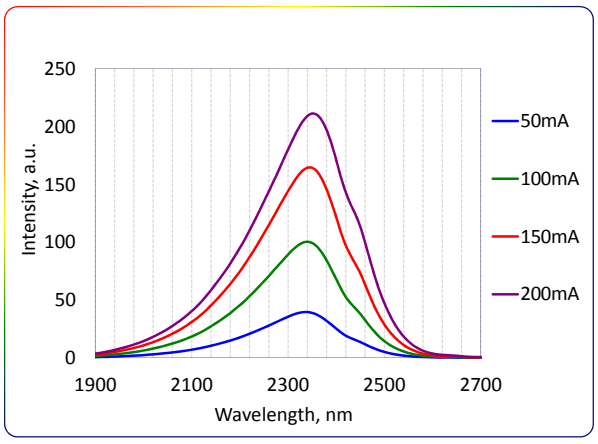
Lms23LED

Parameters	Units	Conditions	Ratings		
			Min	Typ	Max
Peak emission wavelength	µm	T=300 K, I = 150 mA qCW	2,30	2,35	2,39
FWHM of the emission band	nm	I = 150 mA qCW	170	220	270
Quasi-CW Optical Power	mW	I = 200 mA qCW	0,6	0,8	1,0
Pulsed Peak Optical Power	mW	I=1 A, f=1 kHz, duty cycle 0.1%	12	15	20
Voltage	V	T=300 K, I=200 mA	0,5	-	2,5
Switching time	ns	T=300 K	10	20	30
Operating temperature range	°C	-200…+50			
Soldering temperature	°C	180			

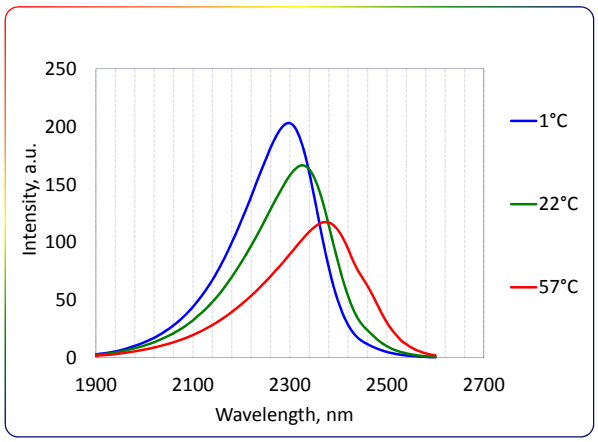


Light Emitting Diodes Lms23LED series are fabricated from narrow band-gap GaInAsSb/AlGaAsSb heterostructures lattice matched to GaSb substrate.

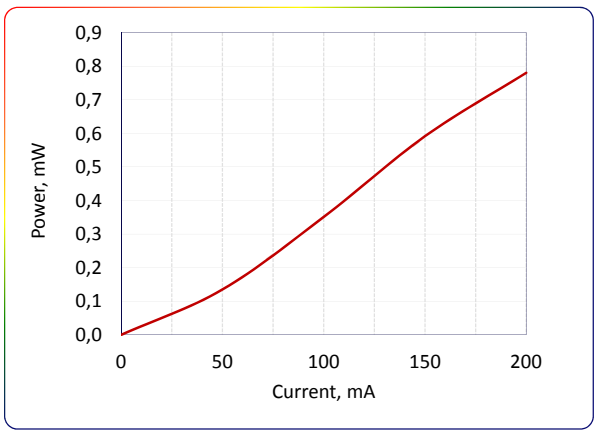
Spectra at different currents (qCW, T=300 K)



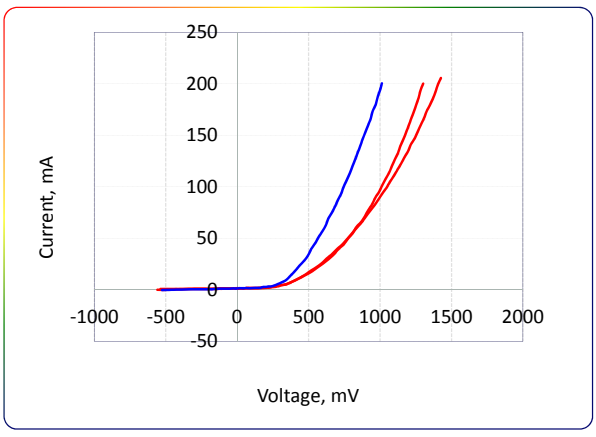
Spectra at different temperatures (qCW, I=150 mA)



LED Power Characteristic (quasi-CW mode, T=300K)



LED Typical Current-Voltage Characteristics (T=300K)

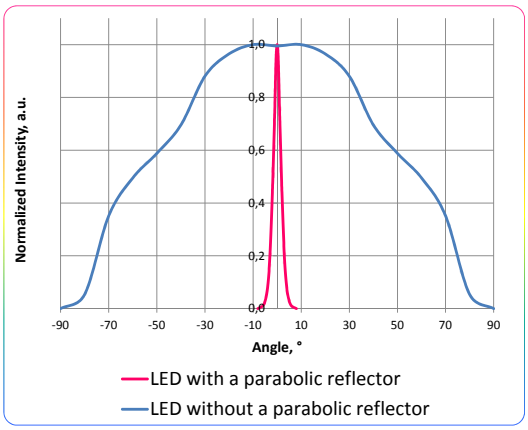


Mid-Infrared Light Emitting Diode

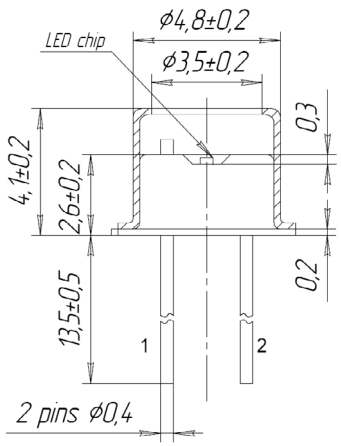
2,30 - 2,39 µm

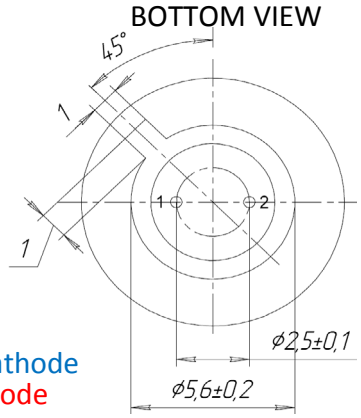
Packages	Model
TO-18 with a cap without a window	Lms MIR LED
TO-18 with a parabolic reflector without a window	Lms MIR LED-R
TO-18 with a parabolic reflector with a glass window	Lms MIR LED-RW
TO-5 with a built-in thermocooler and thermoresistor, covered by a cap with a glass window	Lms MIR LED-TEM
TO-5 with a built-in thermocooler and thermoresistor, covered by a parabolic reflector with a glass window	Lms MIR LED-TEM-R

Beam Divergence (Far-field pattern)



Technical Drawing

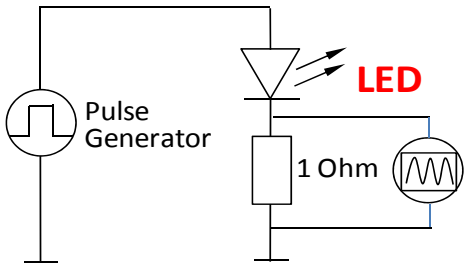




1 - LED cathode
2 - LEDanode

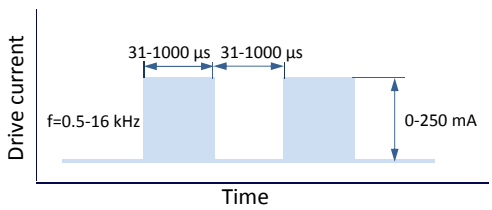
To drive the LED we recommend to use:

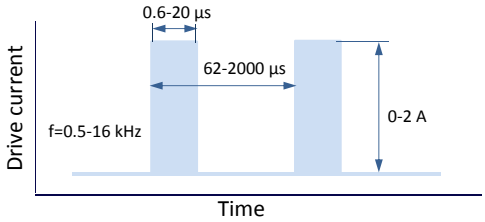
- **LED basic circuit connection**



- **LED drivers and evaluation boards designed by LED Microsensor NT**

We recommend to use Quasi Continuous Wave (qCW) mode with duty cycle 50% or 25% to obtain maximum average optical power and short Pulse modes to obtain maximum peak power. Hard CW (continius wave) mode is NOT recommended.





IMPORTANT CAUTIONS:

- Please check your connection circuit before turning on the LED
- Please observe the LED polarity: LED anode is marked with a RED dot
- Please do not connect the LED to the multimeter