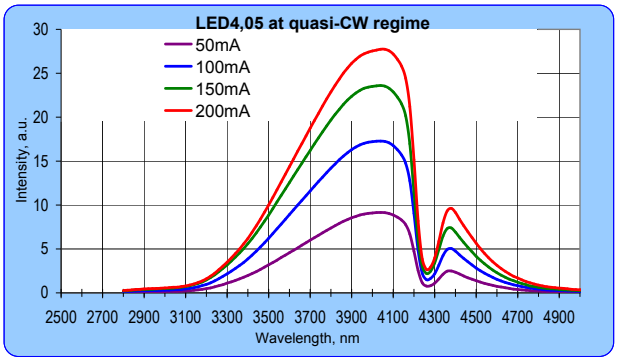
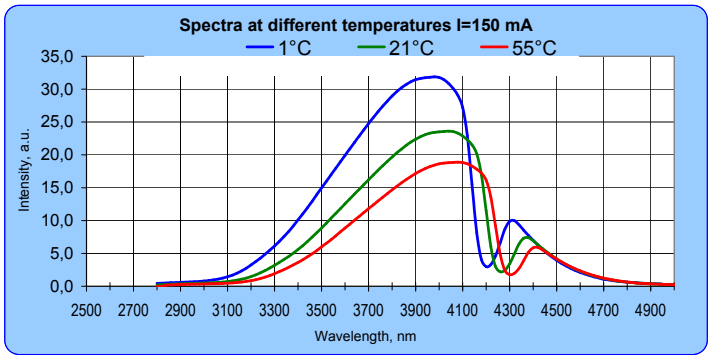
# Mid-Infrared Light Emitting Diode 4,05 μm

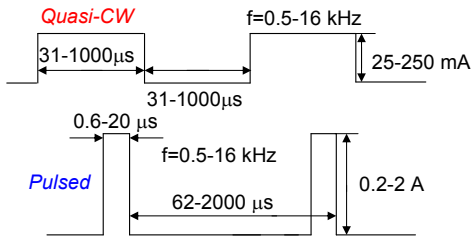

Light Emitting Diodes with central wavelength 4,1 μm series are based on heterostructures grown on InAs substrates by MOCVD. InAsSb is used in the active layer. Wide band gap solid solutions InAsSbP with P content 50% are used for good electron confinement.

| Parameters | Units | Conditions | Ratings | | |
|---|---|---|---|---|---|
| | | | Min | Typ | Max |
| Peak emission wavelength | μm | T=300 K | 3,95 | 4,05 | 4,10 |
| FWHM of the emission band | nm | 150 mA CW | 700 | 850 | 1000 |
| Quasi-CW Optical Power | μW | 200 mA qCW | 15 | 20 | 30 |
| Pulsed Optical Power | μW | 1 A | 180 | 200 | 220 |
| Switching Time | ns | T=300 K | 10 | 20 | 30 |
| Operating Temperature Range, °C | -240° ÷ +50° | | | | |
| Emitting Area, μm | 300x300 | | | | |
| Soldering temperature | 260 °C | | | | |

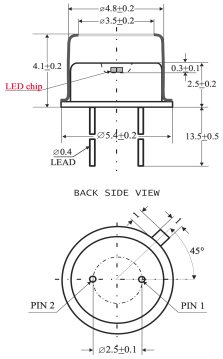
| Package | |
|---|---|
| TO-18 with a non-removable cap without a window | **MID IR LED** |
| TO-18 with a parabolic reflector without a window | MID IR LED-PR |
| TO-18 with a parabolic reflector with a window | MID IR LED-PRwin |
| TO-5 with a built-in thermocooler and thermoresistor, covered by a cap with a window | MID IR LED-TEC |
| TO-5 with a built-in thermocooler and thermoresistor, covered by a parabolic reflector with a window | MID IR LED-TEC-PR |

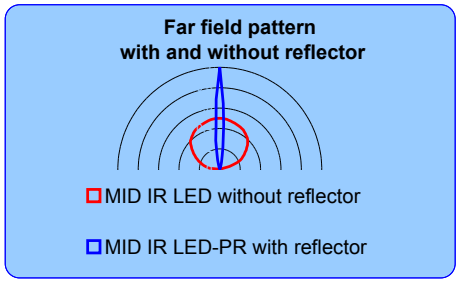


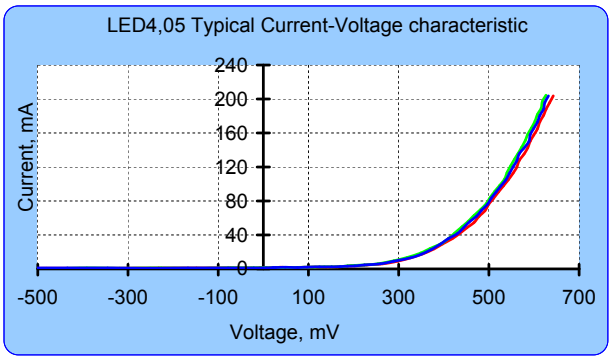



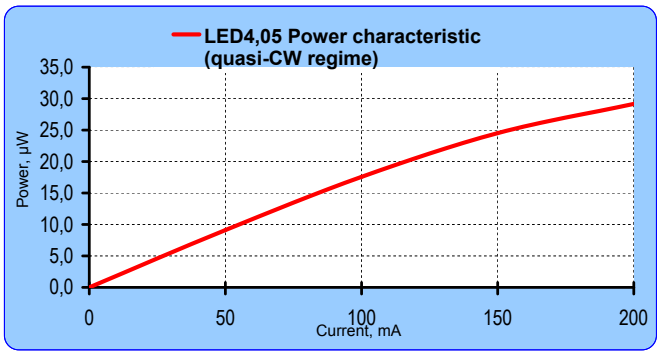




**Maximum current is 220 mA at quasi-CW**
**Maximum pulsed current is 1 A (duration 500 ns, repetition rate 2 kHz)**
**Optimal operating current is 150-200 mA at quasi-CW.**




## RELATED PRODUCTS

**LED driver D-31M** can be used for LED power supply in quasi-CW and pulse modes
**LED driver mD-1c** can be used for LED power supply in a quasi-CW mode
**LED driver mD-1p** can be used for LED power supply in a pulse mode

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