



## LED36-TEC-PR



### TECHNICAL DATA

### Mid-Infrared Light Emitting Diode

Light Emitting Diodes with central wavelength 3.65  $\mu\text{m}$  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. LED36-SMD3 has a stable output power and a lifetime more than 80000 hours.

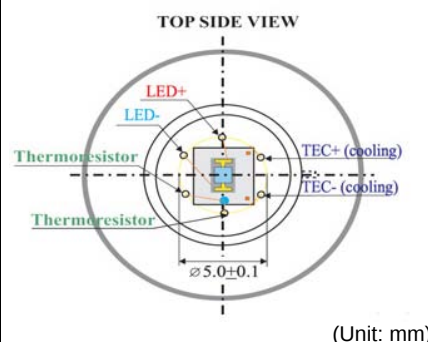
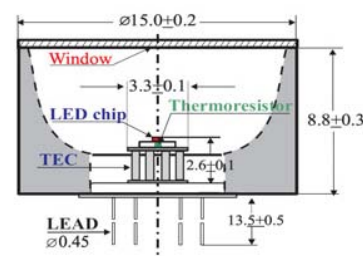
#### Features

- Structure: InAsSb/InAsSbP
- Peak Wavelength: typ. 3.65  $\mu\text{m}$
- Optical Output Power: typ. 30  $\mu\text{W}$  qCW
- Package: TO-5, with TEC, thermistor, PR and window



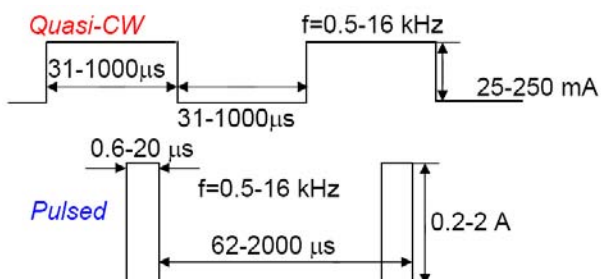
#### Specifications

| Item                      | Condition                                                                        | Min. | Rating<br>Typ. | Max. | Unit               |
|---------------------------|----------------------------------------------------------------------------------|------|----------------|------|--------------------|
| Peak Wavelength           | T=300 K                                                                          | 3.60 | 3.65           | 3.70 | $\mu\text{m}$      |
| FWHM                      | 150 mA CW                                                                        | 0.40 | 0.50           | 0.60 | $\mu\text{m}$      |
| Quasi-CW<br>Optical Power | 200 mA qCW                                                                       | 20   | 30             | 40   | $\mu\text{W}$      |
| Pulsed<br>Optical Power   | 1 A                                                                              | 180  | 200            | 220  | mW                 |
| Switching Time            | T=300 K                                                                          | 10   | 20             | 30   | ns                 |
| Operation Voltage         | 200 mA qCW                                                                       | 0.2  | -              | 1.0  | V                  |
| Operating<br>Temperature  | -240 ... +50                                                                     |      |                |      | $^{\circ}\text{C}$ |
| Emitting Area             | 300x300                                                                          |      |                |      | $\mu\text{m}$      |
| Soldering<br>Temperature  | 180                                                                              |      |                |      | $^{\circ}\text{C}$ |
| Package                   | TO-5, with built-in thermocooler, thermoresistor, parabolic reflector and window |      |                |      |                    |



(Unit: mm)

#### 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

