

## MTE9087NJ

### Features

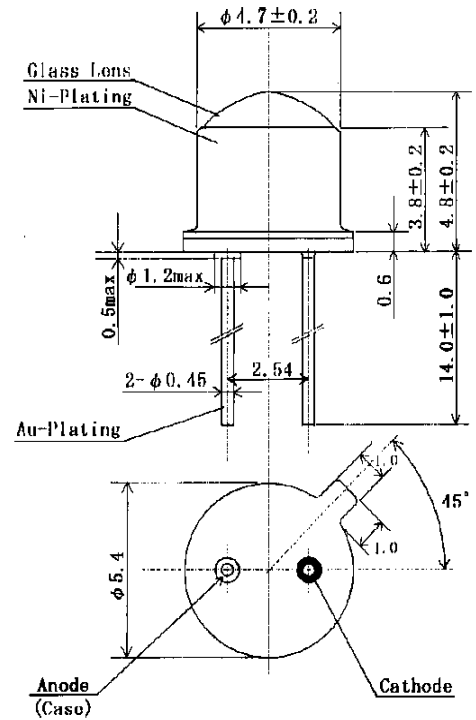
High Power Output  
Parallel Rays  
Narrow Beam Angle  
Low Temp. Coefficient of PO

### Applications

Optical Switches  
Linear Rotary Encoder

### Maximum Ratings (Ta=25°C)

| Characteristic         | Symbol           | Max.       | Test Condition     | Unit |
|------------------------|------------------|------------|--------------------|------|
| Forward Current        | I <sub>F</sub>   | 100        | -                  | mA   |
| Pulsed Forward Current | I <sub>FP</sub>  | .80        | tw=10μS,<br>T=10mS | A    |
| Reverse Voltage        | V <sub>R</sub>   | 5          | -                  | V    |
| Power Dissipation      | P <sub>D</sub>   | 180.00     | -                  | mW   |
| Operating Temperature  | T <sub>opr</sub> | -30 ~ +80  | -                  | °C   |
| Storage Temperature    | T <sub>stg</sub> | -40 ~ +125 | -                  | °C   |
| Junction Temperature   | T <sub>j</sub>   | 125        | -                  | °C   |
| Soldering Temperature  | T <sub>sol</sub> | 260        | for 5 sec. max     | °C   |



### Opto-Electrical Characteristics (Ta=25°C)

| Characteristic            | Symbol         | Test Condition                            | Min  | Typ   | Max  | Unit  |
|---------------------------|----------------|---|------|-------|------|-------|
| Forward Voltage           | V <sub>F</sub> | I <sub>F</sub> =50mA                      | -    | 1.45  | 1.80 | V     |
| Reverse Current           | I <sub>R</sub> | V <sub>R</sub> =5V                        | -    | -     | 10   | μA    |
| Power Output              | PO             | I <sub>F</sub> =50mA                      | 1.60 | 2.20  | -    | mW    |
| Half Intensity Beam Angle | θ              | -   | -    | ± 5°  | -    | deg.  |
| Peak Wavelength           | λ <sub>p</sub> | I <sub>F</sub> =50mA                      | -    | 880   | -    | nm    |
| Spectral Line Half Width  | Δλ             | I <sub>F</sub> =50mA                      | -    | 40    | -    | nm    |
| Temp Coefficient of PO    | P/T            | I <sub>F</sub> =10mA                      | -    | -0.05 | -    | %/°C  |
| Temp Coefficient of VF    | V/T            | I <sub>F</sub> =10mA                      | -    | -1.60 | -    | mV/°C |
| Junction Capacitance      | C <sub>j</sub> | 1 MHz, V=0V                               | -    | 65    | -    | pF    |
| Cut-Off Frequency         | f <sub>c</sub> | I <sub>FP</sub> =50mA+20mA <sub>p-p</sub> | -    | -     | -    | MHz   |

### Company Headquarters

3 Northway Lane North  
Latham, New York 12110  
Toll Free: 800.984.5337  
Fax: 518.785.4725

### West Coast Sales Office

950 South Coast Drive, Suite 265  
Costa Mesa, California 92626  
Toll Free: 800.984.5337  
Fax: 714.850.9314

MTE9087NJ Graphs

