

## MTE2050S-OH1

### Features

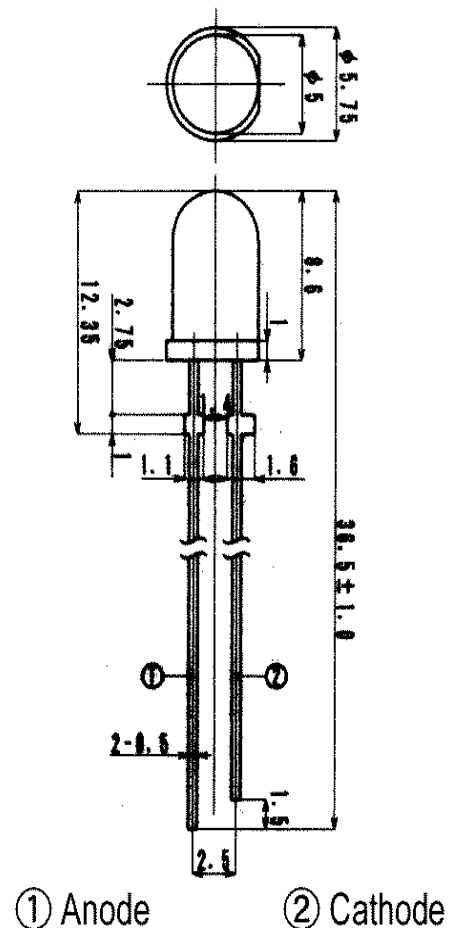
High Output Power  
Narrow Beam Angle  
High Reliability

### Applications

Optical Switches  
Bar Code Reader

### 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>  | 1.00         | 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> | -20~+80      | –                  | °C   |
| Storage Temperature    | T <sub>stg</sub> | -30<br>~+100 | –                  | °C   |
| Junction Temperature   | T <sub>j</sub>   | 100          | –                  | °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  | –   | 11.00 | –    | mW    |
| Half Intensity Beam Angle | θ              | –                     | –   | ± 12° | –    | deg.  |
| Peak Wavelength           | λ <sub>p</sub> | I <sub>F</sub> =50mA  | –   | 880   | –    | nm    |
| Spectral Line Half Width  | Δλ             | I <sub>F</sub> =50mA  | –   | 60    | –    | nm    |
| Rise Time                 | T <sub>r</sub> | I <sub>FP</sub> =50mA | –   | 1.50  | –    | ns    |
| Fall Time                 | T <sub>f</sub> | I <sub>FP</sub> =50mA | –   | .80   | –    | ns    |
| Temp Coefficient of PO    | P/T            | I <sub>F</sub> =10mA  | –   | –.50  | –    | %/°C  |
| Temp Coefficient of VF    | V/T            | I <sub>F</sub> =10mA  | –   | –1.50 | –    | mV/°C |
| Junction Capacitance      | C <sub>j</sub> | 1 MHz, V=0V           | –   | 15    | –    | pF    |

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## MTE2050S-OH1 Graphs

