

Peak Emission Wavelength: 810nm

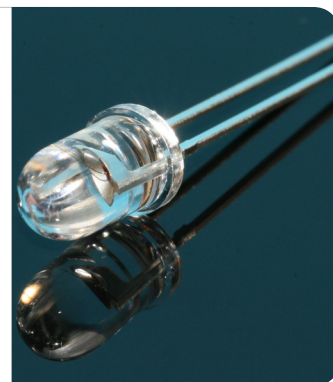
The MTE2081-OH5 consists of a 810nm high output infrared die in a water-clear 5mm plastic molded package. Custom package solutions and sorting are available.

FEATURES

- > High Output Power
- > Narrow Beam Angle
- > High Reliability
- > Excellent Optical / Mechanical Axis Alignment

APPLICATIONS

- > Optical Switches & Sensors
- > Optical Position Sensing / Security Systems
- > Medical Applications / Optical Communication
- > Currency Validation / Light Curtain



Absolute Maximum Ratings (Ta=25°C)

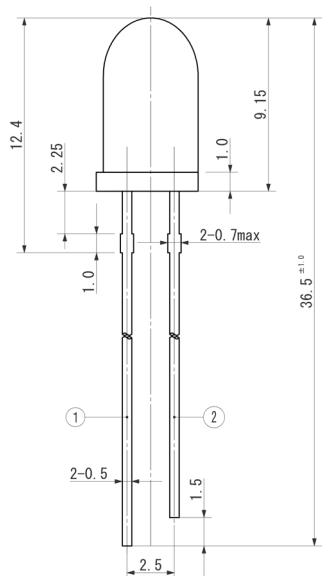


| ITEMS | SYMBOL | RATINGS | UNIT |
|------------------------------|--------|------------|------|
| Forward Current (DC) | IF | 100 | mA |
| Forward Current (Pulse)*1 | IFP | 1 | A |
| Reverse Voltage | VR | 5 | V |
| Power Dissipation | PD | 180 | mW |
| Operating Temperature Range | Topr | -20 ~ +80 | °C |
| Storage Temperature Range | Tstg | -30 ~ +100 | °C |
| Junction Temperature | Tj | 100 | °C |
| Lead Soldering Temperature*2 | Tls | 260 | °C |

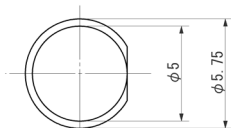
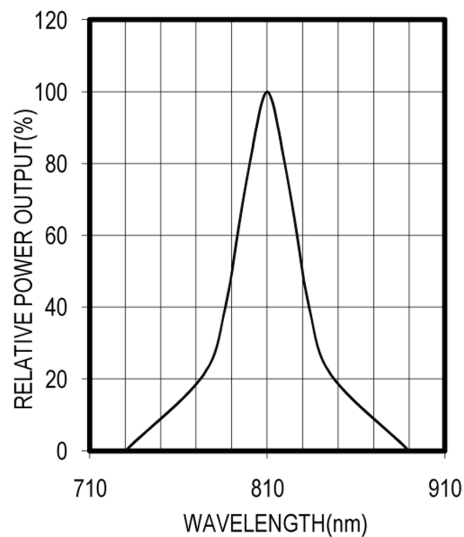
*1: Tw=10μsec, T=10msec. *2: Time 5Sec max, Position: Up to 3mm from the body.

Electrical & Optical Characteristics (Ta = 25°C)

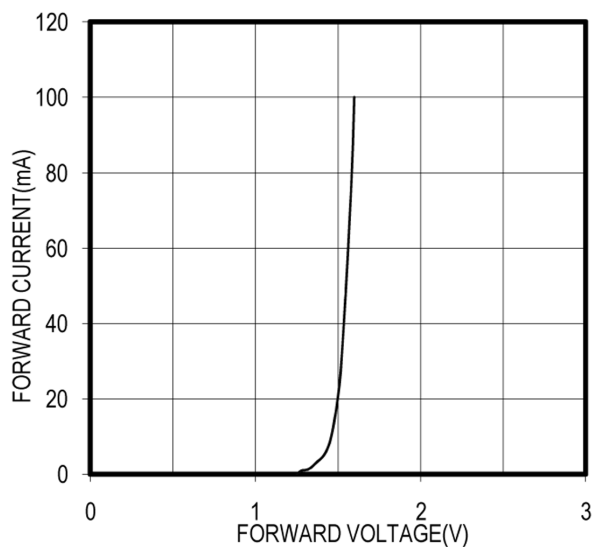
| ITEMS | SYMBOL | CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------------|--------|------------|-----|--------|-----|------|
| Power Output | PO | IF=50mA | -- | 20.0 | -- | mW |
| Forward Voltage | VF | IF=50mA | -- | 1.55 | 1.9 | V |
| Reverse Current | IR | VR=5V | -- | -- | 100 | μA |
| Peak Emission Wavelength | λp | IF=50mA | -- | 810 | -- | nm |
| Spectral Line Half Width | Δλ | IF=50mA | -- | 40 | -- | nm |
| Half Intensity Beam Angle | Θ | IF=50mA | -- | ±7 | -- | deg |
| Switching Time | Tr,Tf | IFP=50mA | -- | 36, 20 | -- | ns |
| Switching Time | Tr,Tf | IFP=100mA | -- | 30 | -- | ns |



SPECTRAL OUTPUT

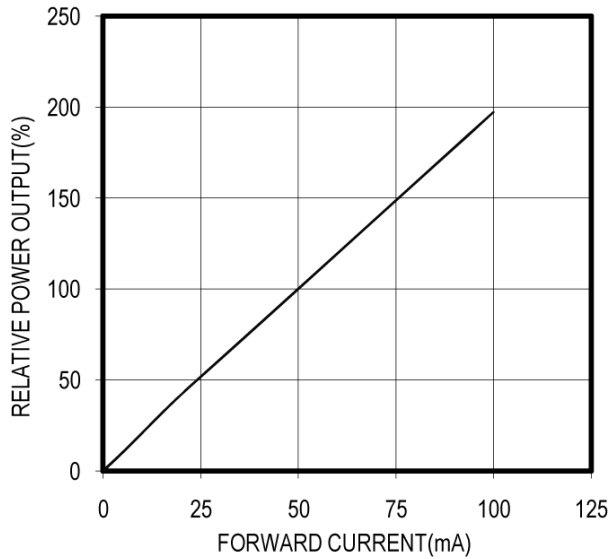


FORWARD I-V CHARACTERISTICS

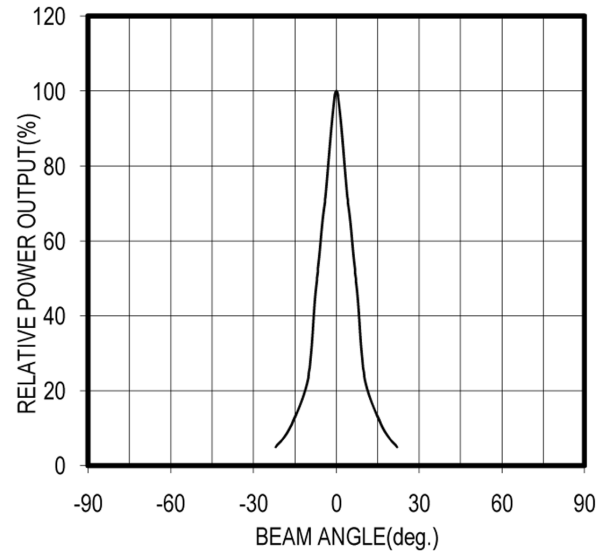


Unit: mm, Tolerance: ± 0.2

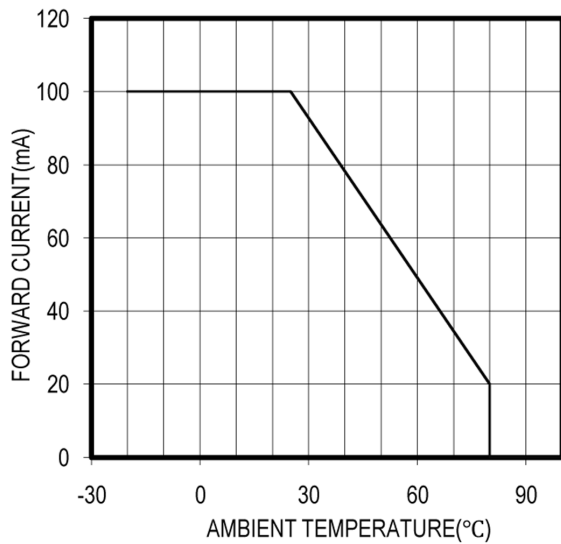
RELATIVE POWER vs FORWARD CURRENT



RADIATION PATTERN



THERMAL DERATING CURVE



The information contained herein is subject to change without notice.

2017-03-29

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