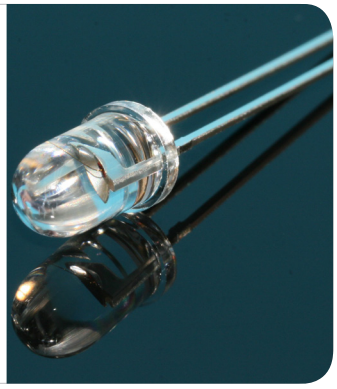
Marktech Optoelectronics

# Visible Red Emitter

Product No: **MTE2077N1-R**

## Peak Emission Wavelength: 765nm

The MTE2077N1-R is a red T 1 3/4, 5mm water clear emitter designed for applications requiring high power output and high reliability in a narrow angle package.



**FEATURES**

> High Reliability
> Narrow Beam Angle
> High Output Power

**APPLICATIONS**

> Optical Sensors
> Optical Switches
> Medical Application

## Absolute Maximum Ratings (Ta=25°C)

| ITEMS | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| Forward Current (DC) | IF | 50 | mA |
| Forward Current (Pulse)*1 | IFP | 0.5 | A |
| Reverse Voltage | VR | 5 | V |
| Power Dissipation | PD | 100 | 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 5 Sec 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=20mA | -- | 8.0 | -- | mW |
| Forward Voltage | VF | IF=20mA | -- | 1.55 | 1.90 | V |
| Reverse Current | IR | VR=5V | -- | -- | 100 | μA |
| Peak Emission Wavelength | λp | IF=20mA | -- | 765 | -- | nm |
| Spectral Line Half Width | Δλ | IF=20mA | -- | 35 | -- | nm |
| Half Intensity Beam Angle | Θ | IF=20mA | -- | ±8 | -- | deg |

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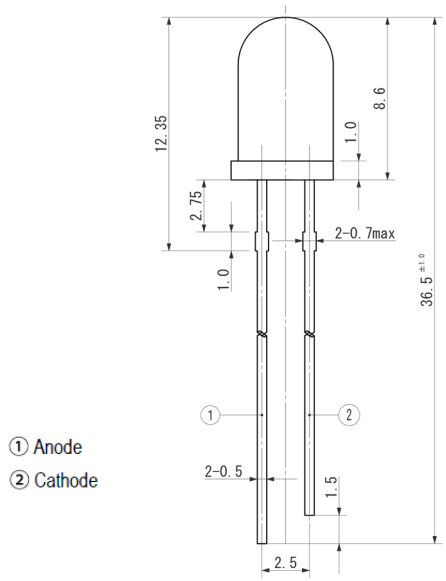


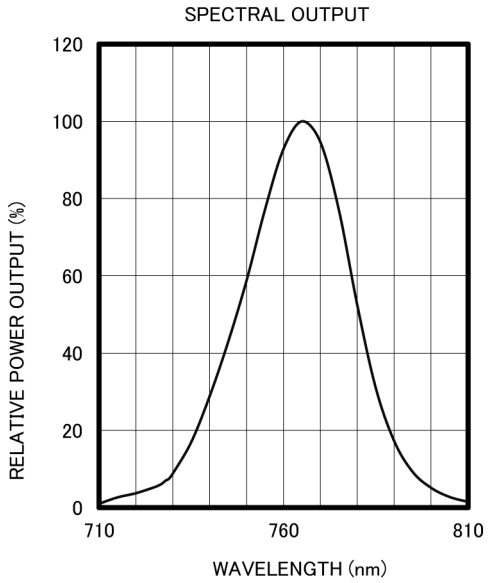


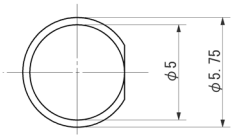


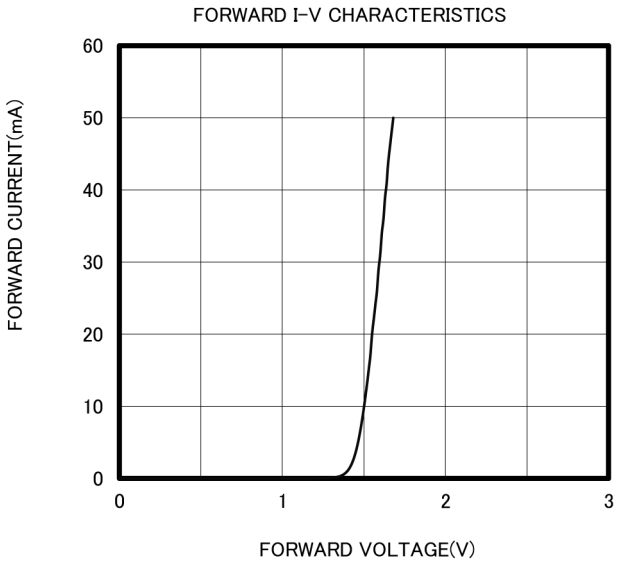


Unit: mm, Tolerance: ±0.2

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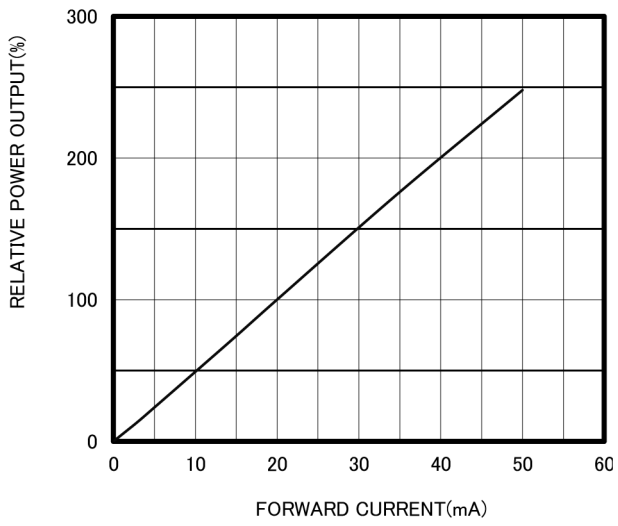
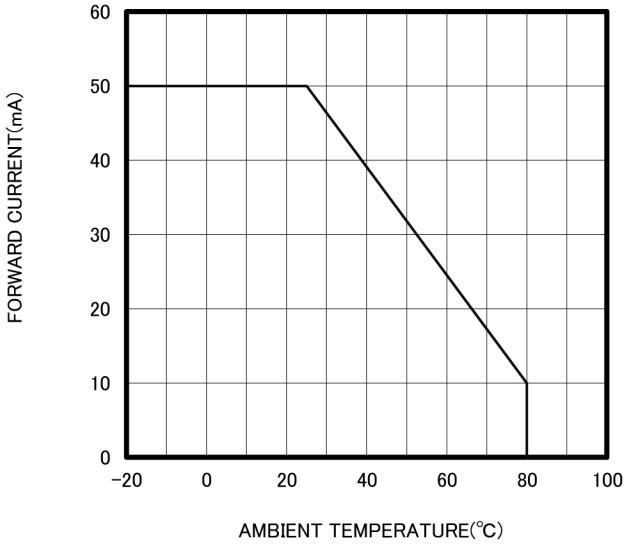
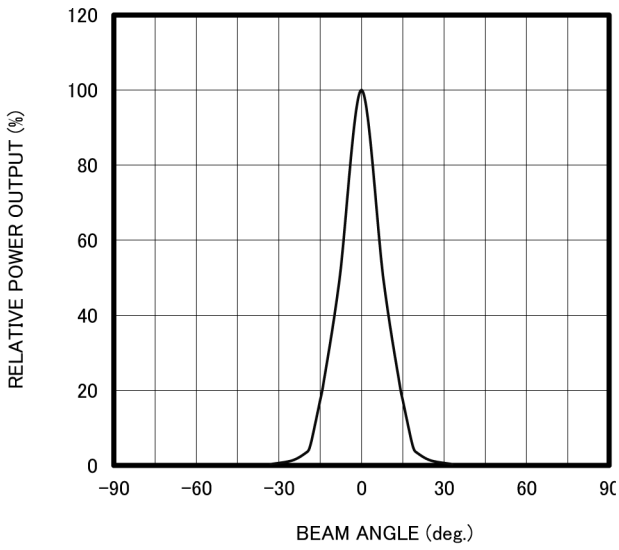
RELATIVE POWER vs FORWARD CURRENT




THERMAL DERATING CURVE




RADIATION PATTERN




The information contained herein is subject to change without notice.

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