

# Plastic Mold Infrared LEDs

## KEDE1451M52

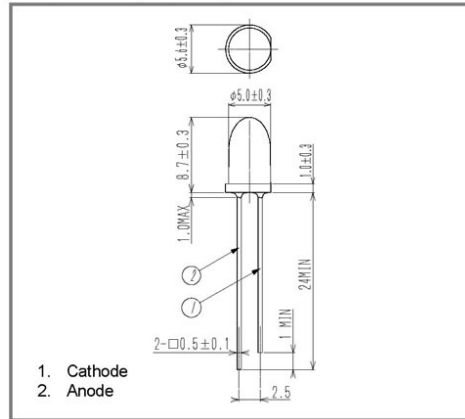
### Features

- High output power
- Sharp directivity
- Direct modulation

### Applications

- Optical switches
- Optical instruments
- Water sensors
- Humidity analysis

Dimensions (unit: mm)



### Specifications

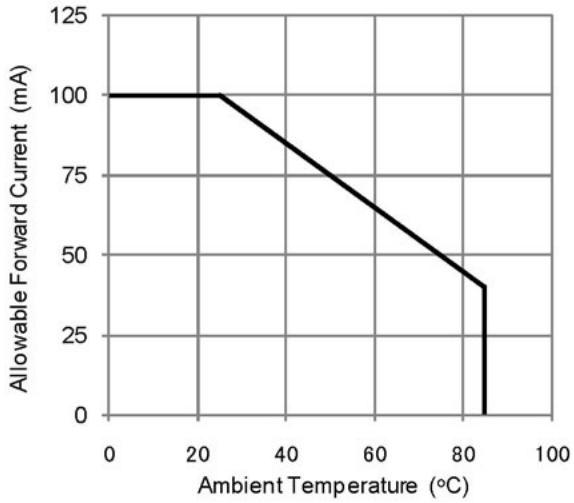
#### Absolute Maximum Ratings

| Parameter             | Symbol    | Value       | Unit | Conditions                            |
|-----------------------|-----------|-------------|------|---------------------------------------|
| Forward current       | $I_F$     | 100         | mA   |                                       |
| Peak forward current  | $I_{FP}$  | 1           | A    | Puls width=100 $\mu$ s, Duty ratio=1% |
| Reverse voltage       | $V_R$     | 3           | V    |                                       |
| Power dissipation     | $P_D$     | 130         | mW   |                                       |
| Operating temperature | $T_{opr}$ | -30 to +85  |      | Avoid dew condensation                |
| Storage temperature   | $T_{stg}$ | -30 to +100 |      | Avoid dew condensation                |

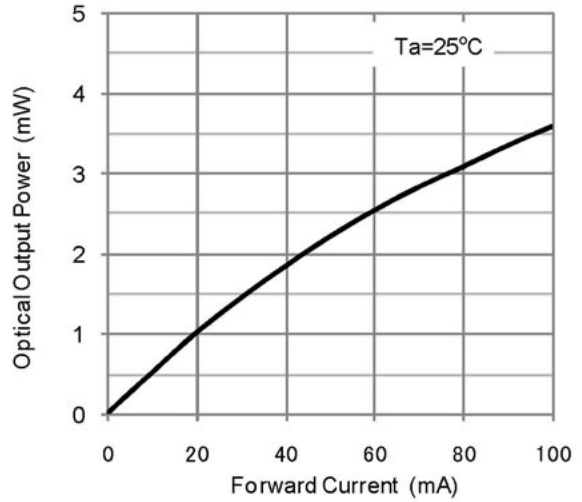
#### Electrical and Optical characteristics

| Parameter            | Symbol | Value |      |      | Unit    | Conditions  |
|----------------------|--------|-------|------|------|---------|-------------|
|                      |        | Min.  | Typ. | Max  |         |             |
| Forward voltage      | $V_F$  |       | 0.8  | 1.3  | V       | $I_F=50$ mA |
| Reverse Current      | $I_R$  |       |      | 10   | $\mu$ A | $V_R=1$ V   |
| Optical output power | $P_O$  |       | 2.2  |      | mW      | $I_F=50$ mA |
| Peak wavelength      | $\rho$ | 1400  | 1450 | 1500 | nm      | $I_F=50$ mA |
| Spectral width       |        |       | 100  |      | nm      | $I_F=50$ mA |
| Half angle           | 2      |       | 10   |      | deg     | $I_F=50$ mA |

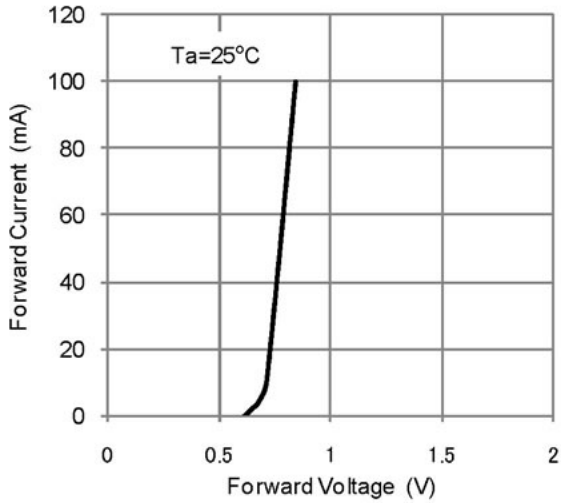
**Allowable Forward Current - Ambient Temperature**



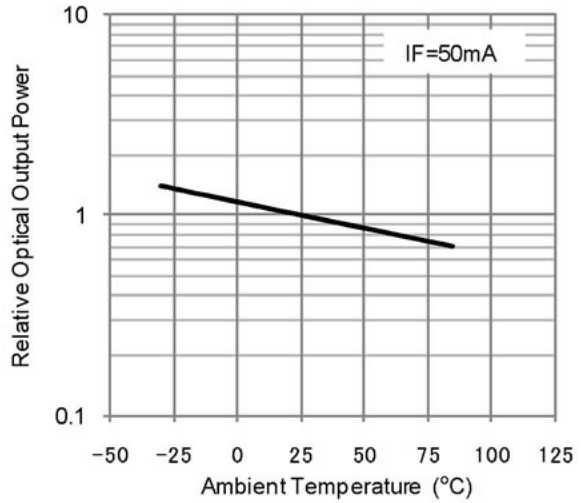
**Optical Output Power - Forward Current**



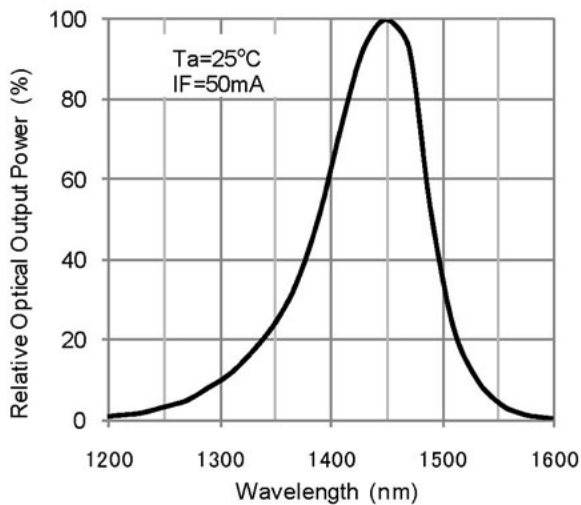
**Forward Current - Forward Voltage**



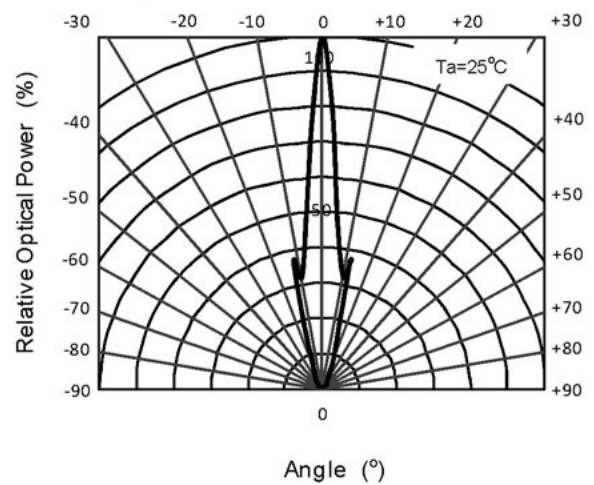
**Relative Optical Output Power - Ambient Temperature**



**Spectral Distribution**



**Directivity**



Specifications are subject to change without notice.