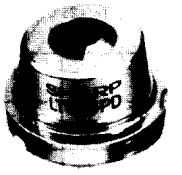
# LT015PD

## Features

- High output (maximum optical power output: 40 mW)
- Wavelength. 830nm
- Single transverse mode



## Applications

- Optical disk memories
- Medical apparatus
- Optical floppy disks
- Optical memory cards
- Information processing equipment

## Absolute Maximum Ratings

(Tc=25°C)

| Parameter | | Symbol | Ratings | Units |
|---|---|---|---|---|
| Optical power output | | Po | 40 | mW |
| Reverse voltage | Laser | $V_R$ | 2 | V |
| | PIN | | 30 | |
| Operating temperature *1 | | Topr | −10 to +50 | °C |
| Storage temperature *1 | | Tstg | −40 to +85 | °C |

* 1 Case temperature

## Electro-optical Characteristics * 1

(Tc=25°C)

| Parameter | | | Symbol | Condition | Ratings MIN | Ratings TYP | Ratings MAX | Units |
|---|---|---|---|---|---|---|---|---|
| Threshold current | | | Ith | | — | 60 | 80 | mA |
| Operating current | | | Iop | Po = 30mW | — | 95 | 130 | mA |
| Operating voltage | | | Vop | Po = 30mW | — | 1.75 | 2.2 | V |
| Wavelength *2 | | | λp | Po = 30mW | 815 | 830 | 845 | nm |
| Monitor current | | | Im | Po=30mW $V_R$=15V | 30 | 100 | 380 | μA |
| Radiation characteristics | Angle *3 | Parallel to junction | θ // | Po=30mW | 8 | 9.5 | 14 | deg |
| | | Perpendicular to junction | θ ⊥ | Po=30mW | 20 | 27 | 38 | deg |
| | Ripple | | | Po=30mW | | | ±20 | % |
| Emission point accuracy | Angle | | Δφ// | Po=30mW | — | — | ±2 | deg |
| | | | Δφ⊥ | Po=30mW | — | — | ±3 | deg |
| | Position | | Δx, Δy, Δz | — | — | — | ±80 | μm |
| Differential efficiency | | | η | 20mW / $I_F$(30mW) − $I_F$(10mW) | 0.5 | 0.8 | 1.1 | mW/mA |

* 1 Initial value
* 2 Single transverse mode
* 3 Angle at 50% peak intensity ( ll width at half-maximum)

## Electrical Characteristics of Photodiode

(Tc=25°C)

| Parameter | Symbol | Condition | Ratings MIN | Ratings TYP | Ratings MAX | Units |
|---|---|---|---|---|---|---|
| Sensitivity | S | $V_R$=15V | — | 3.3 | — | μA/mW |
| Dark current | $I_D$ | $V_R$=15V | — | — | 150 | nA |
| Terminal capacitance | Ct | $V_R$=15V | — | 18 | 20 | pF |