

## LT050PS/MS

## Red Laser Diode

Compact Laser Diode for DVD(635nm-5mW)

### General Description

Sharp's red laser diodes **LT050PS / LT050MS** have been developed for DVD that will bring a great hope to visual media of the next generation.

### Model Name

- **LT050PS** ●●● Single power supply
- **LT050MS** ●●● Double power supply

### Features

- (1) Maximum optical output : 5mW
- (2) Wavelength: 635nm
- (3) Compact  $\phi 5.6$ mm package
- (4) Stable transverse mode
- (5) High temperature operation at 60°C
- (7) Realizes high temperature operation by introducing a tensile strain into the multi-quantum well active layer.
- (8) Stable optical characteristics by developing an index guide structure of MBE method 2 times growth
- (9) Pair use with Sharp's OPIC\* light detector **IS1630** is recommended.

\*OPIC : OPIC (Optical IC) is a trademark of the SHARP Corporation.  
An OPIC consists of a light-detecting element and signal-processing circuit integrated onto a single chip.

### Applications

- DVD players
- Bar code readers
- Pointers etc.

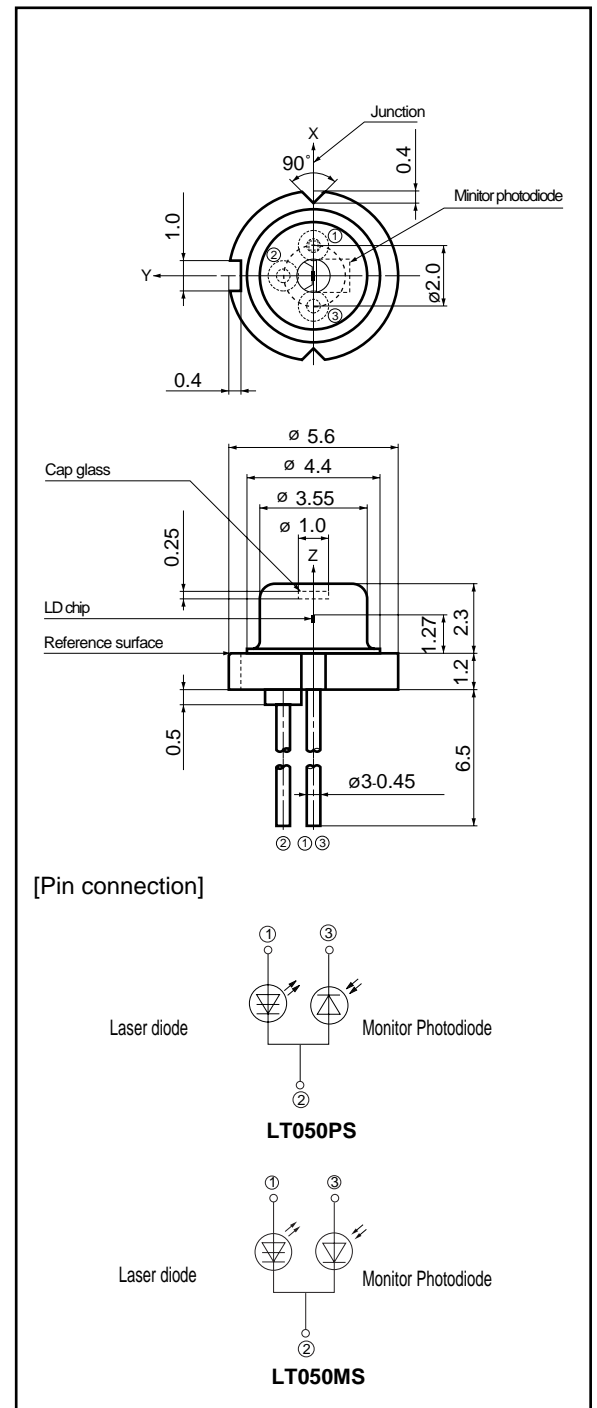
### Specifications

Electro-optical characteristics  
( $T_c=25^\circ\text{C}, P_o=3\text{mW}$ )

Parameter	Symbol	Ratings(TYP.)
Optical power output	$P_o$	MAX. 5 mW
Wavelength	$\lambda_p$	635 nm
Threshold current	$I_{th}$	45 mA
Operating current	$I_{op}$	55 mA
Operating voltage	$V_{op}$	2.3 V
Radiation angle	Parallel	$\theta_{//}$ 8°
	Perpendicular	$\theta_{\perp}$ 30°

### Outline Dimensions

(Unit:mm)



(Notice)

- In the absence of device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.
- Specifications are subject to change without notice for improvement.

(Internet)

- Data for Sharp's optoelectronic/power devices is provided for internet. ( Address <http://www.sharp.co.jp/ecg/>)