

# PNZ150 (PN150)

## Silicon planar type

For optical control systems

### ■ Features

- High sensitivity
- Wide spectral sensitivity characteristics, suited for detecting GaAs LEDs
- Small collector-emitter cutoff current (base open)
- Side-view plastic mold type package

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-emitter voltage (Base open)	$V_{\text{CEO}}$	20	V
Collector current	$I_{\text{C}}$	20	mA
Collector power dissipation	$P_{\text{C}}$	100	mW
Operating ambient temperature	$T_{\text{opr}}$	-25 to +85	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-30 to +100	$^\circ\text{C}$

### ■ Electrical-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Photocurrent *1	$I_{\text{L}}$	$V_{\text{CE}} = 10 \text{ V}, L = 500 \text{ lx}$	1.0	3.0		mA
Collector-emitter cutoff current (Base open)	$I_{\text{CEO}}$	$V_{\text{CE}} = 10 \text{ V}$		0.01	1.0	$\mu\text{A}$
Collector-emitter saturation voltage *1	$V_{\text{CE(sat)}}$	$I_{\text{L}} = 1 \text{ mA}, L = 1000 \text{ lx}$		0.2	0.5	V
Peak sensitivity wavelength	$\lambda_{\text{PD}}$	$V_{\text{CE}} = 10 \text{ V}$		800		nm
Half-power angle	$\theta$	The angle when the photocurrent is halved		35		$^\circ$
Rise time *2	$t_{\text{r}}$	$V_{\text{CC}} = 10 \text{ V}, I_{\text{L}} = 5 \text{ mA}, R_{\text{L}} = 100 \Omega$		4		$\mu\text{s}$
Fall time *2	$t_{\text{f}}$			4		$\mu\text{s}$

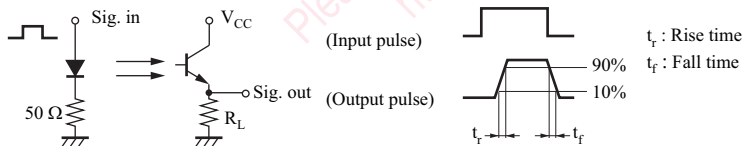
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. Spectral sensitivity characteristics: Sensitivity for wave length over 400 nm maximum sensitivity ratio is 100%.

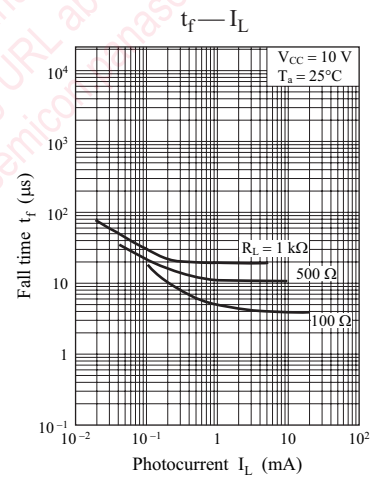
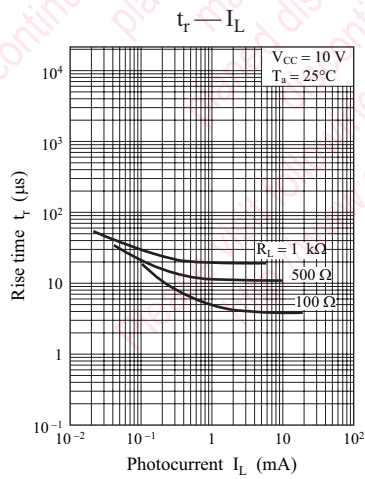
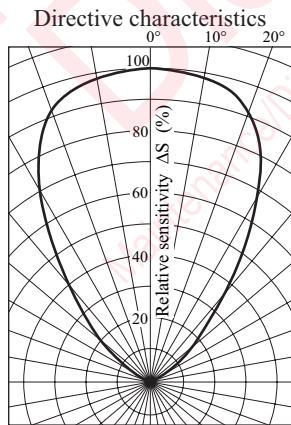
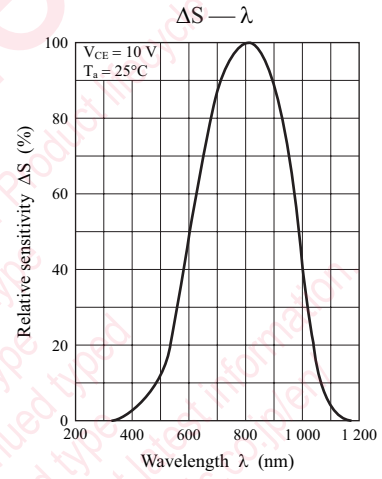
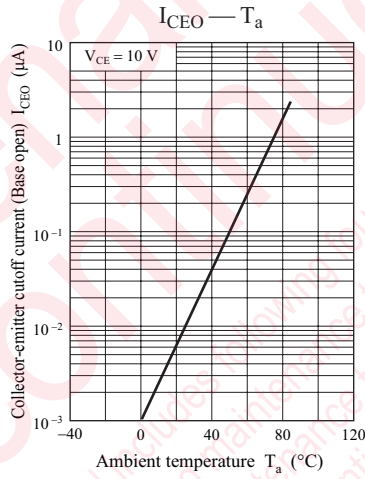
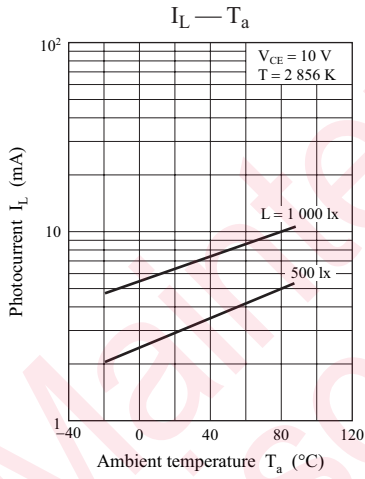
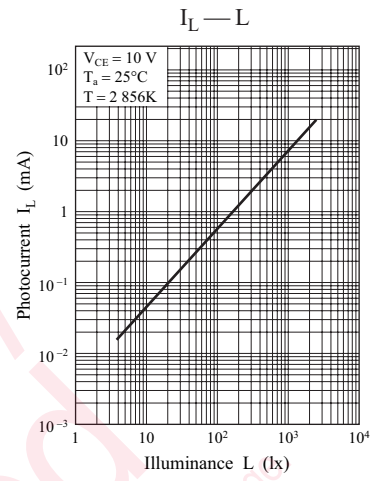
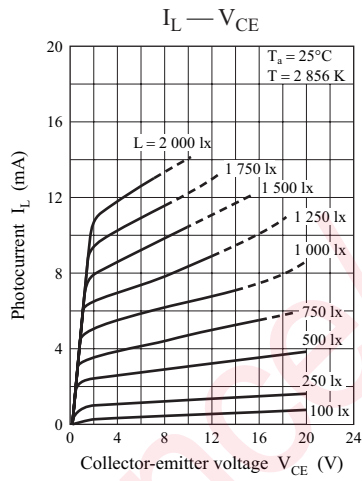
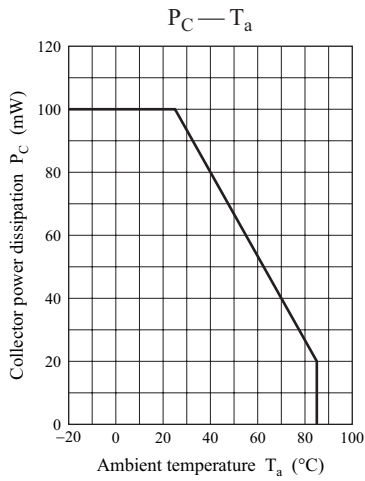
3. This device is designed by disregarding radiation.

4. \*1:Source: Tungsten lamp (color temperature 2 856K)

\*2: Switching time measurement circuit

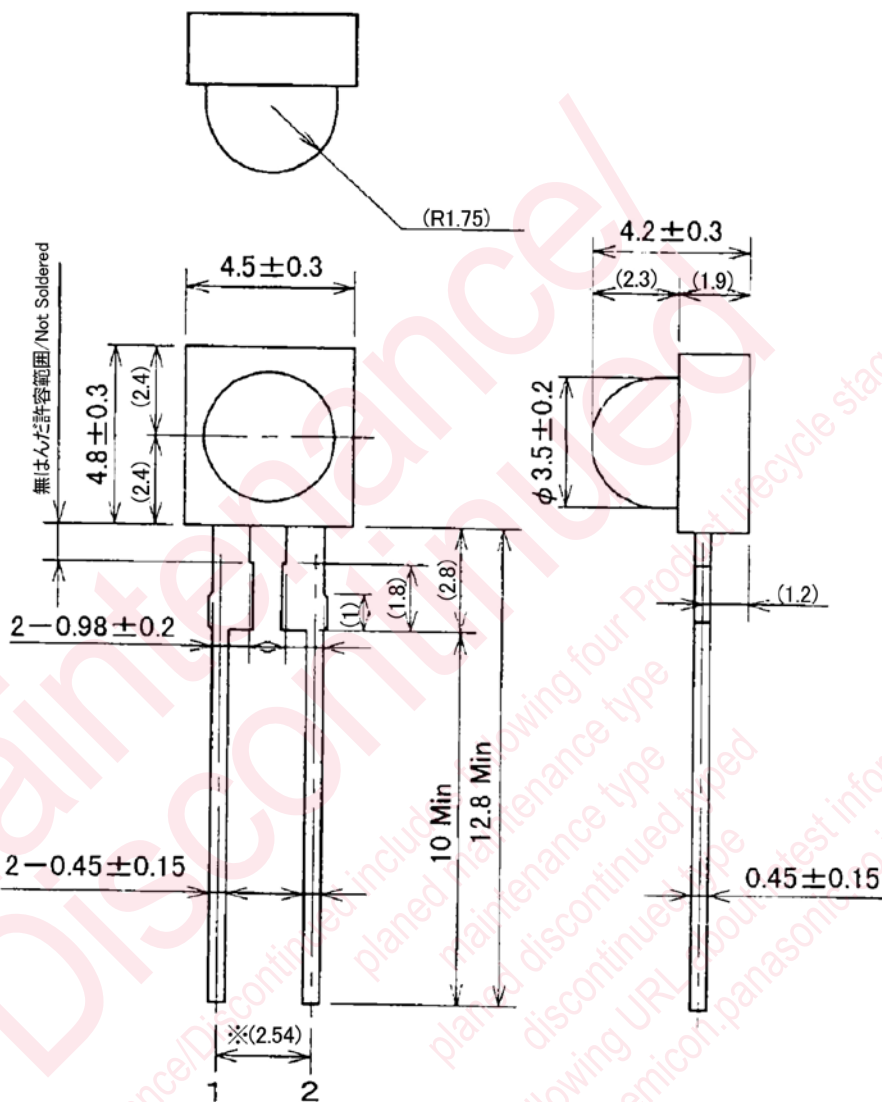


Note) The part number in the parenthesis shows conventional part number.



■ Package (Unit: mm)

LPTLSN2S0002



(注 1)(Note1)※リード根元寸法とする。/※Indicates root dimensions of lead.  
 (注 2) マーク及び密番は、目視又は顕微鏡に於いて解読できる事。  
 (Note2) What a mark and date code sees an attention and can decode in a microscope.

- Pin name
- 1: Emitter
- 2: Collector

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