

PNZ158 (PN158)

Silicon planar type

For optical control systems

■ Features

- High sensitivity
- Fast response: $t_r = 4 \mu\text{s}$ (typ.)
- Wide spectral sensitivity characteristics, suited for detecting various kinds of LEDs
- Small size, thin side-view type package

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

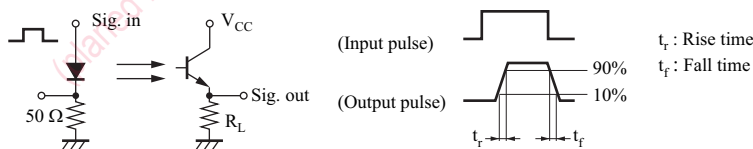
Parameter	Symbol	Rating	Unit
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-collector voltage (Base open)	V_{ECO}	5	V
Collector current	I_{C}	20	mA
Collector power dissipation	P_{C}	100	mW
Operating ambient temperature	T_{opr}	-25 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +100	$^\circ\text{C}$

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

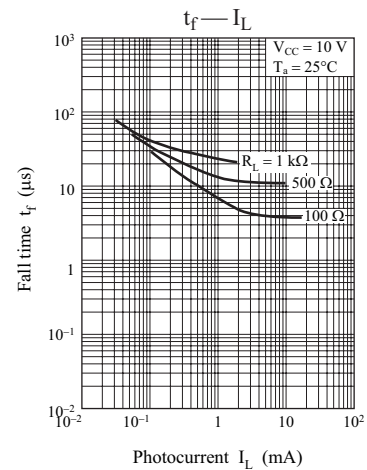
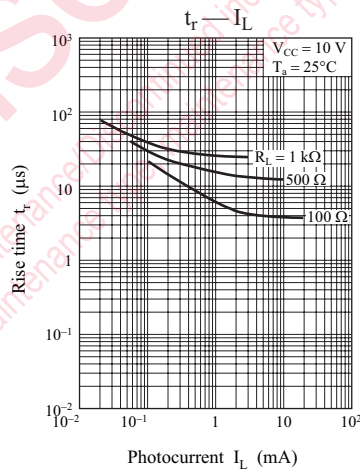
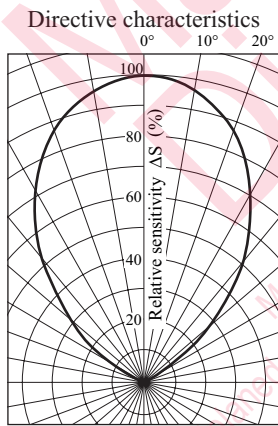
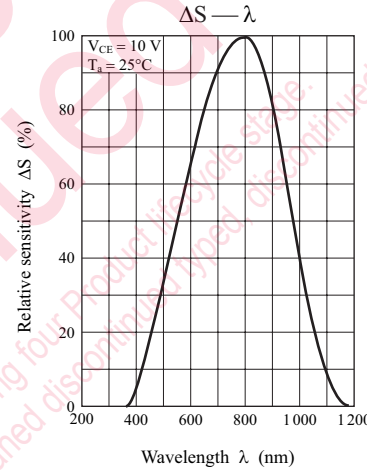
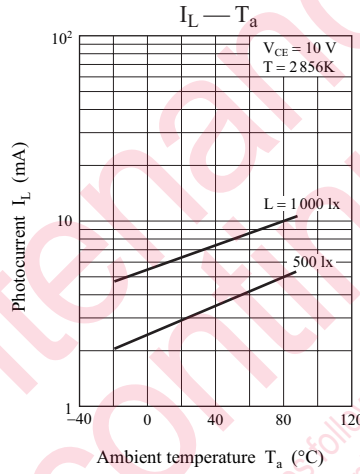
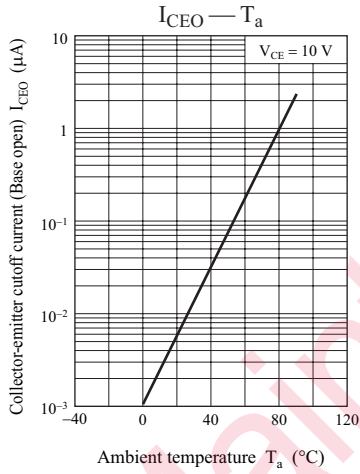
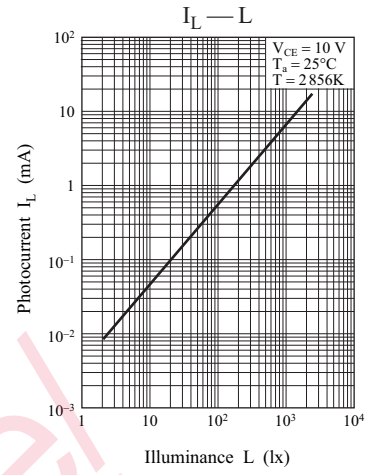
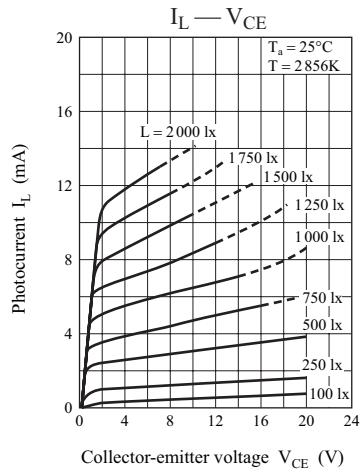
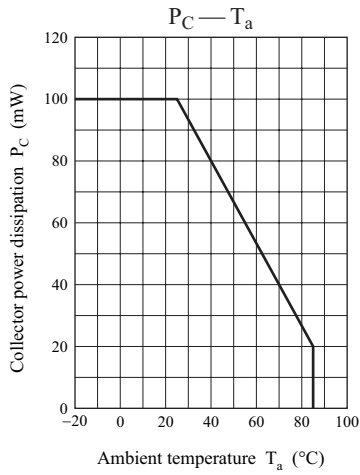
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Photocurrent *1	I_{L}	$V_{\text{CE}} = 10 \text{ V}, L = 500 \text{ lx}$	1.0	4.0		mA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{\text{CE}} = 10 \text{ V}$		0.01	1.0	μA
Collector-emitter saturation voltage *1	$V_{\text{CE(sat)}}$	$I_{\text{L}} = 1 \text{ mA}, L = 1000 \text{ lx}$		0.2	0.5	V
Peak emission wavelength	λ_{P}	$V_{\text{CE}} = 10 \text{ V}$		800		nm
Half-power angle	θ	The angle when the photocurrent is halved		40		$^\circ$
Rise time *2	t_r	$V_{\text{CC}} = 10 \text{ V}, I_{\text{L}} = 5 \text{ mA}, R_{\text{L}} = 100 \Omega$		4	10	μs
Fall time *2	t_f			4	10	μs

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 2856K)
- *2: Switching time measurement circuit

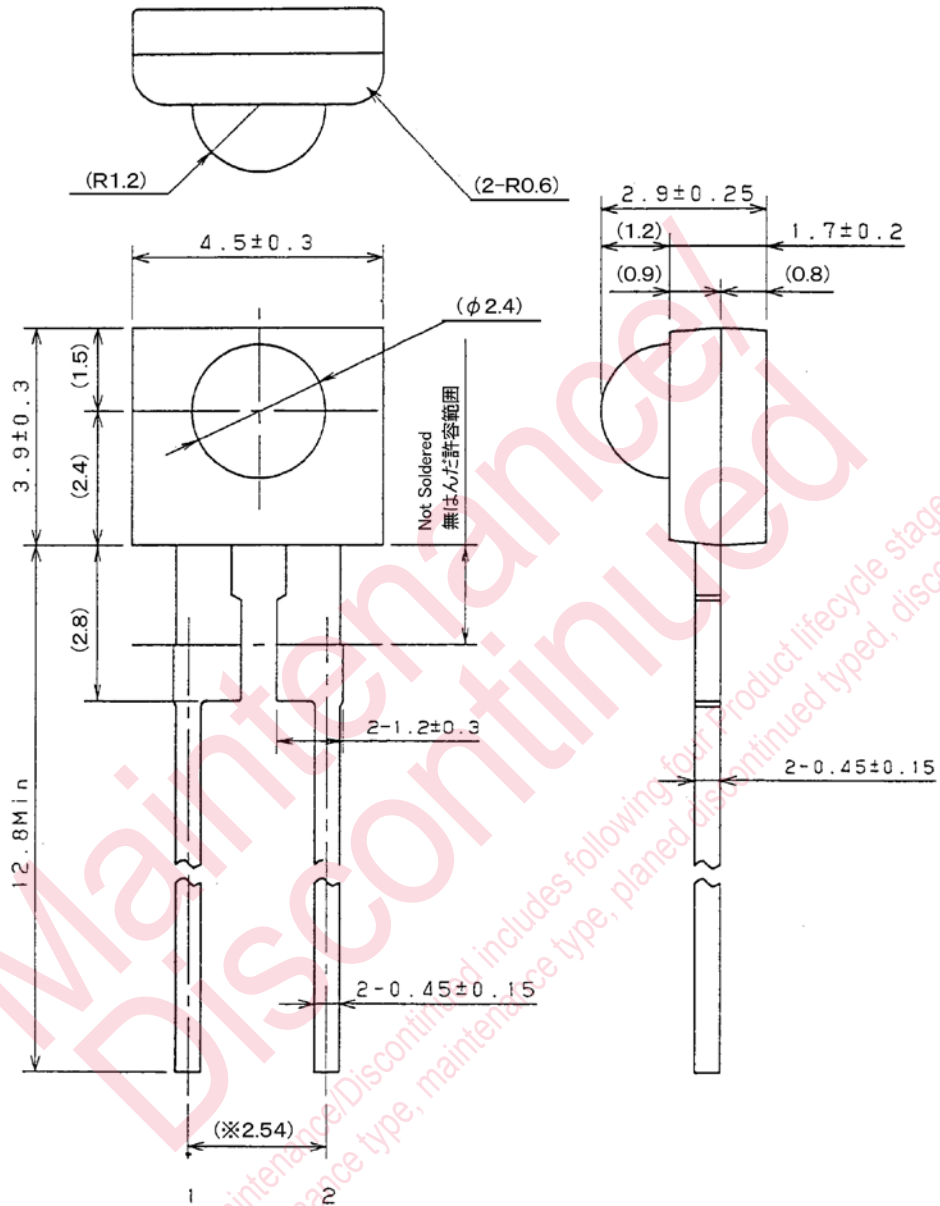


Note) The part number in the parenthesis shows conventional part number.



■ Package (Unit: mm)

LPTLSN2S0001



(注 1)※リード根元寸法とする。
(Note1)※Indicates root dimensions of lead.

- Pin name
- 1: Emitter
- 2: Collector

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