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PNA1401L (PN101)

Silicon planar type

For optical control systems

■ Features

- High sensitivity
- Wide spectral sensitivity characteristics, suited for detecting GaAs LEDs
- Low collector-emitter cutoff current (base open): $I_{CEO} = 5 \text{ nA}$ (typ.)
- Fast response: $t_r, t_f = 3 \text{ } \mu\text{s}$ (typ.)
- TO-18 standard type package

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

Parameter	Symbol	Rating	Unit
Collector-emitter voltage (Base open)	V_{CEO}	30	V
Emitter-collector voltage (Base open)	V_{ECO}	5	V
Collector current	I_C	50	mA
Collector power dissipation *	P_C	150	mW
Operating ambient temperature	T_{opr}	-25 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +100	$^\circ\text{C}$

Note) *: The rate of electric power reduction is 1.5 mW/ $^\circ\text{C}$ above $T_a = 25^\circ\text{C}$.

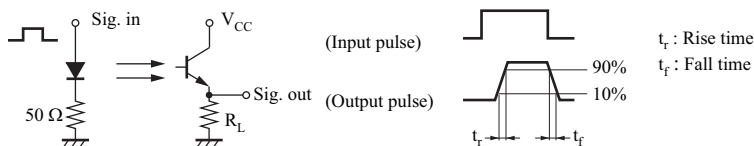
■ Electrical-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Photocurrent *1	I_L	$V_{CE} = 10 \text{ V}, L = 100 \text{ lx}$	1.5	3.5		mA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 10 \text{ V}$		5	300	nA
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_L = 1 \text{ mA}, L = 500 \text{ lx}$		0.2	0.4	V
Peak sensitivity wavelength	λ_{PD}	$V_{CE} = 10 \text{ V}$		800		nm
Half-power angle	θ	The angle when the photocurrent is halved		10		$^\circ$
Rise time *2	t_r	$V_{CC} = 10 \text{ V}, I_L = 5 \text{ mA}, R_L = 100 \text{ } \Omega$		3		μs
Fall time *2	t_f			3		μs

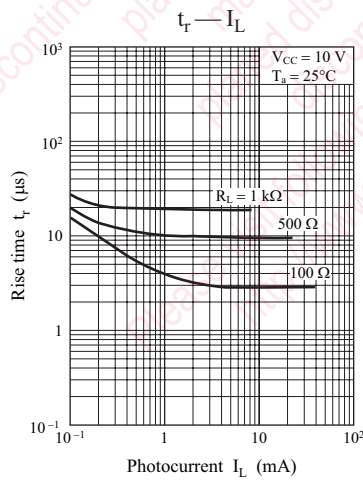
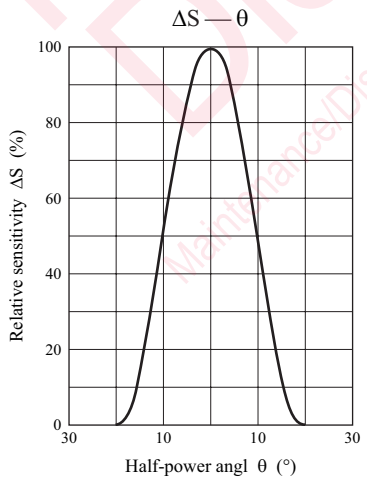
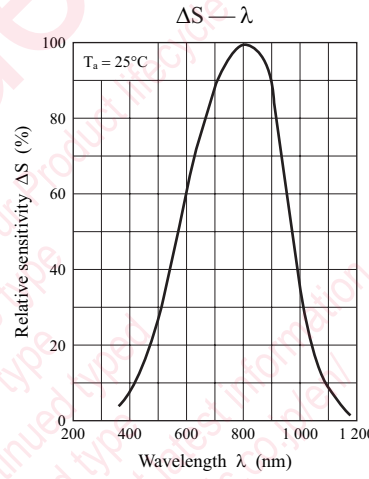
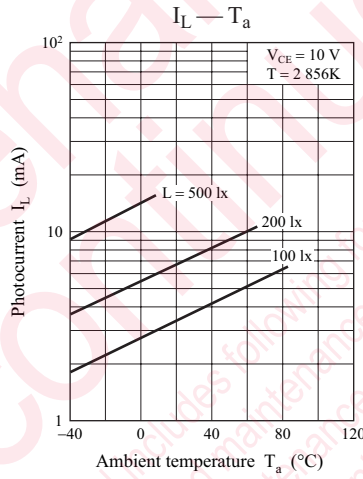
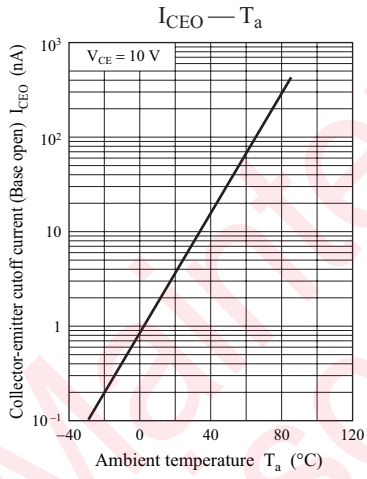
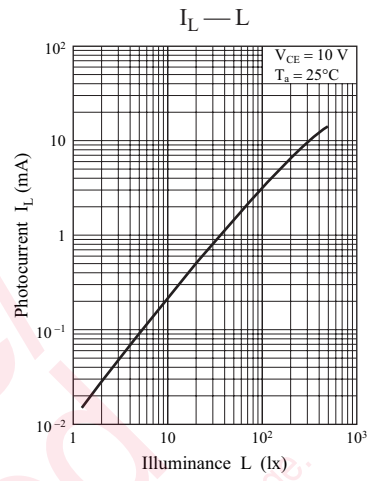
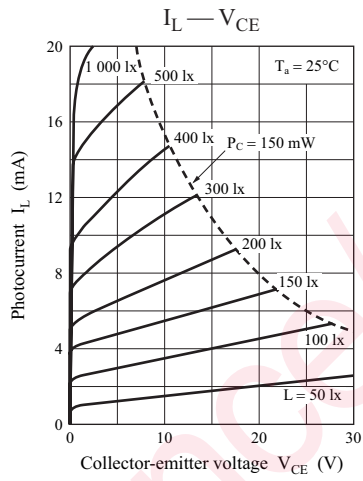
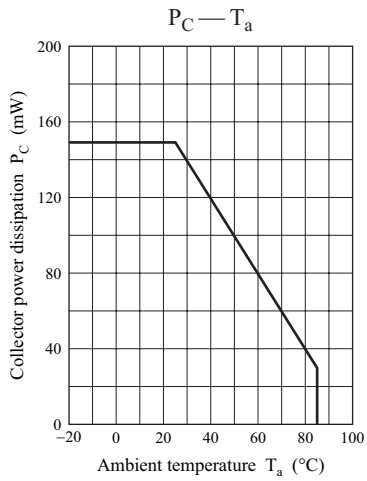
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

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 2 856K)

*2: Switching time measurement circuit

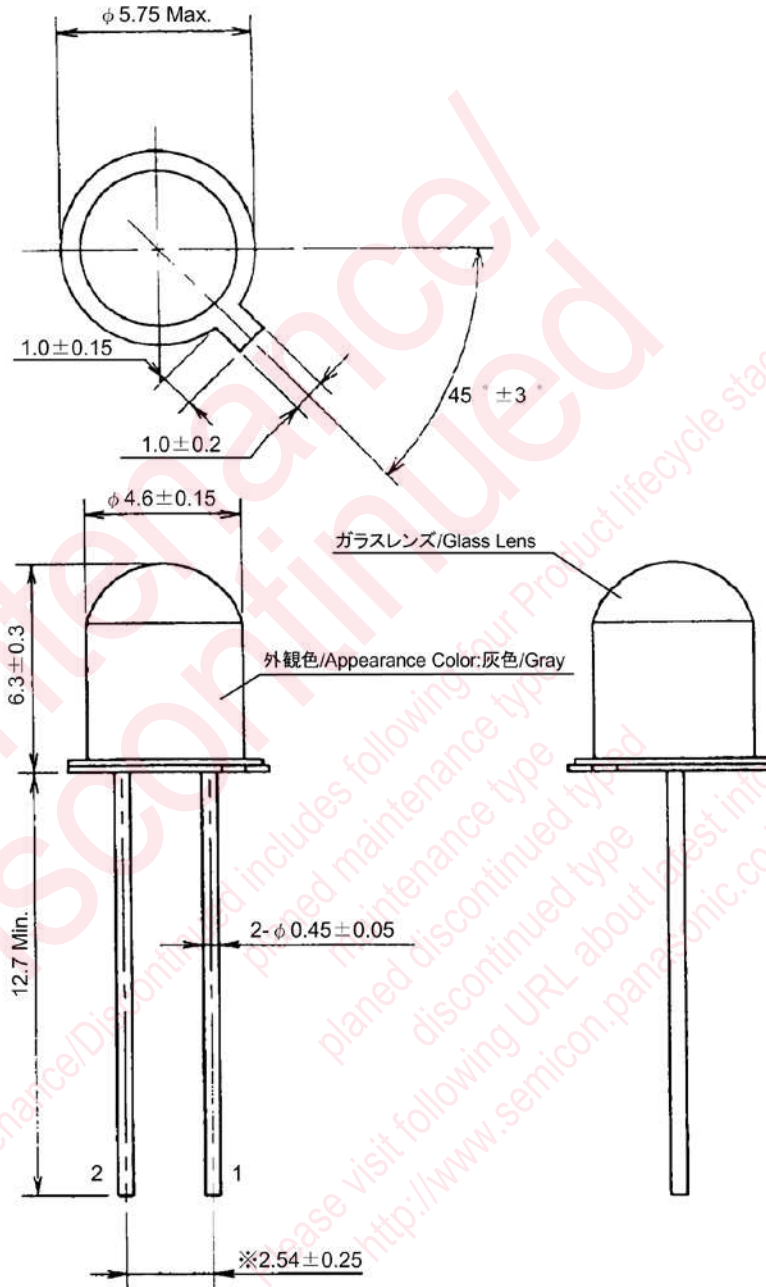


Note) The part number in the parenthesis shows conventional part number.



■ Package (Unit: mm)

MPCLTN2S0001



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

(注 2)マークは、目視又は顕微鏡において確認できる事。

(Notes2)What a mark sees an attention and can decode in a microscope.

• Pin name

1: Emitter

2: Collector

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