This product complies with the RoHS Directive (EU 2002/95/EC).

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 nA (typ.)
- Fast response: t_r , t_f = 3 μs (typ.)
- TO-18 standard type package

■ Absolute Maximum Ratings T_a = 25°C

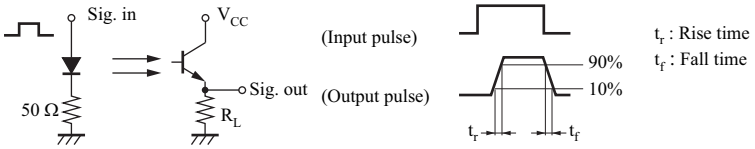
Parameter	Symbol	Rating	Unit
Collector-emitter voltage (Base open)	V_{CEO}	30	V
Emitter-collector voltage (Base open)	V_{ECO}	5	V
Collector current	I_C	50	mA
Collector power dissipation *	P_C	150	mW
Operating ambient temperature	T_{opr}	–25 to +85	°C
Storage temperature	T_{stg}	–30 to +100	°C

Note) ∗: The rate of electric power reduction is 1.5 mW/°C above T_a = 25°C.

■ Electrical-Optical Characteristics T_a = 25°C±3°C

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

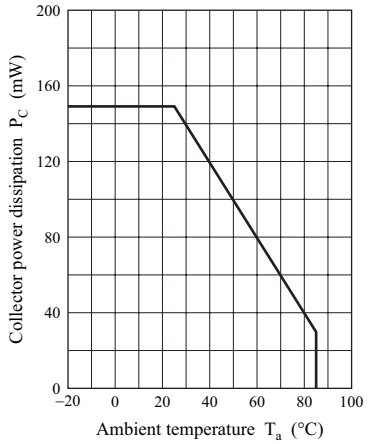
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. Spectral sensitivity characteristics: Sensitivity for wave length over 400 nm maximum sensitivity ratio is 100%.
3. This device is designed by disregarding radiation.
4. ∗1:Source: Tungsten lamp (color temperature 2 856K)
∗2: Switching time measurement circuit



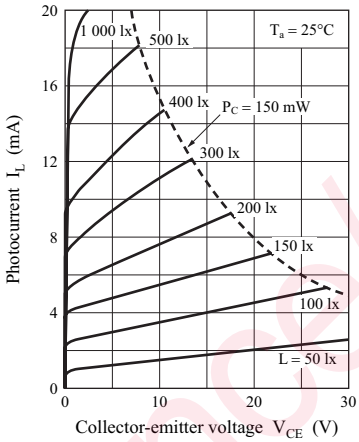
Note) The part number in the parenthesis shows conventional part number.

Maintenance/Discontinued
Discontinued includes following four Product lifecycle stage.
Planned maintenance type
Planned discontinued type
Discontinued typed
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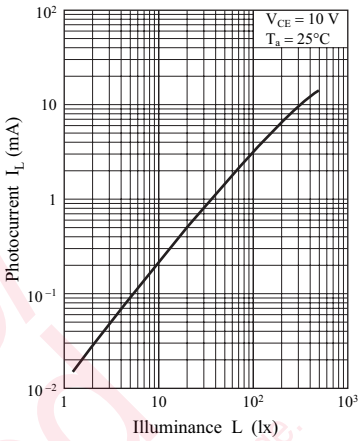
P_C — T_a



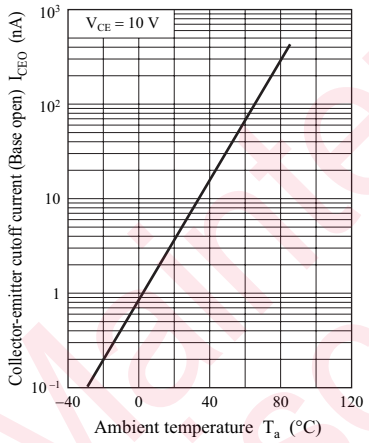
I_L — V_{CE}



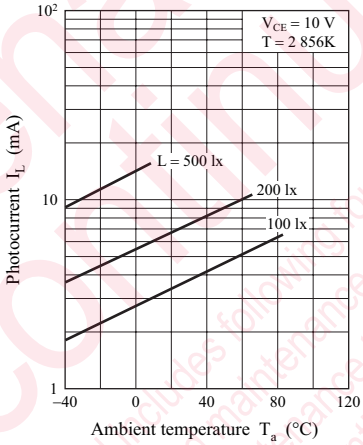
I_L — L



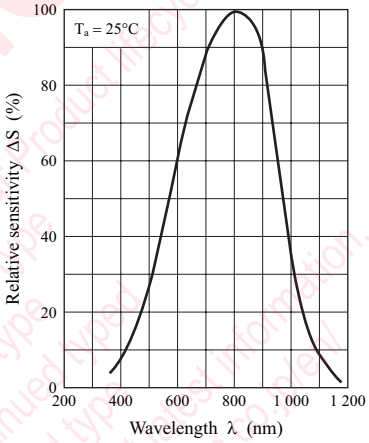
I_{CEO} — T_a



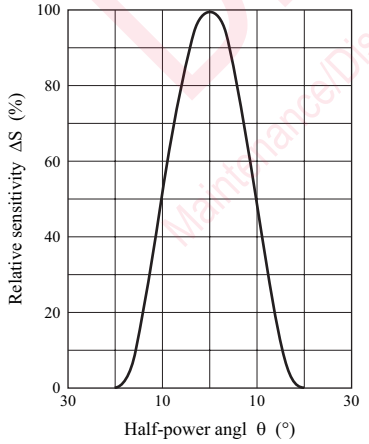
I_L — T_a



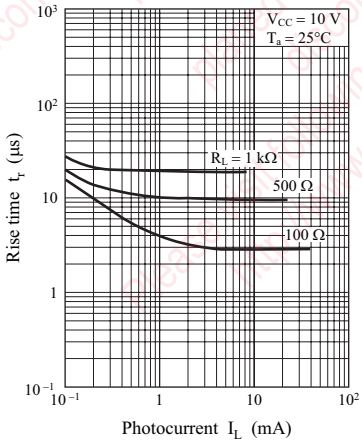
ΔS — λ



ΔS — θ



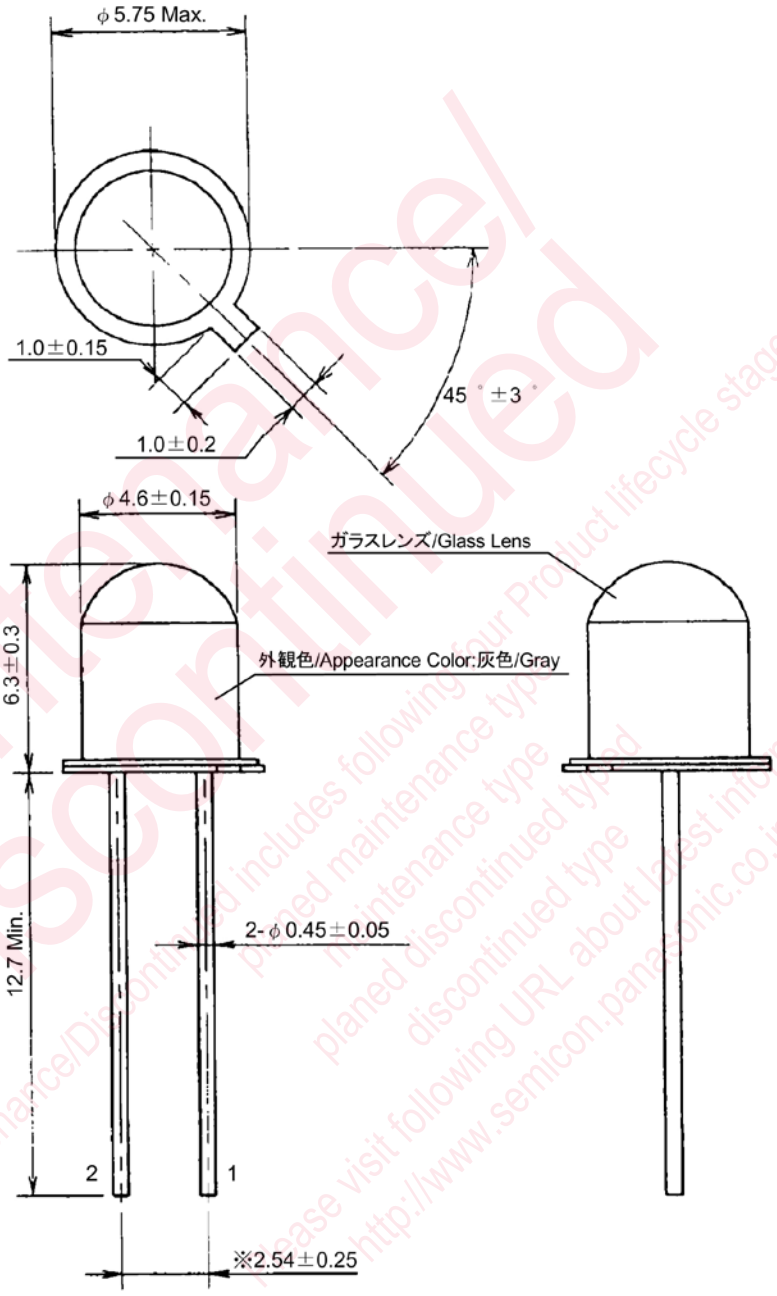
t_r — I_L



Maintenance/Discontinued
Discontinued
Maintenance/Discontinued includes following four products planed maintenance type, discontinued type, discontinued typed and discontinued typed. Please see following URL about the detail information. http://www.semicon.panasonic.co.jp/en/

■ 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

Maintenance/Discontinued includes following four Product lifecycle stage.
planed maintenance type
maintenance type
planed discontinued type
discontinued type
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