



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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PNZ147 (PN147)

Silicon planar type

For optical control systems

■ Features

- High sensitivity
- Wide spectral sensitivity characteristics, suited for detecting GaAs LEDs
- Fast response: $t_r, t_f = 3 \mu s$ (typ.)
- Small size designed for easier mounting to printed circuit board

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

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	50	mW
Operating ambient temperature	T_{opr}	-25 to +85	$^\circ C$
Storage temperature	T_{stg}	-30 to +100	$^\circ C$

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Photocurrent *1	I_{L1}^{*2}	$V_{CE} = 10 V, L = 2 lx$	3	12		μA
	I_{L2}	$V_{CE} = 10 V, L = 500 lx$		3.5		mA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 10 V$		0.01	0.5	μA
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_L = 1 mA, L = 1000 lx$		0.2	0.5	V
Peak sensitivity wavelength	λ_{PD}	$V_{CE} = 10 V$		800		nm
Half-power angle	θ	The angle when the photocurrent is halved		24		$^\circ$
Rise time *3	t_r	$V_{CC} = 10 V, I_L = 5 mA, R_L = 100 \Omega$		3	10	μs
Fall time *3	t_f			3	10	μs

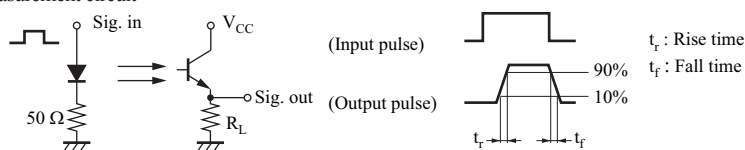
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

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 2 856K)

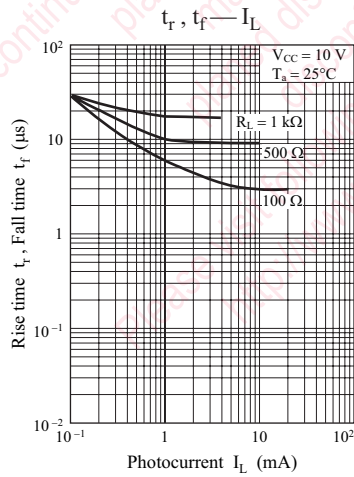
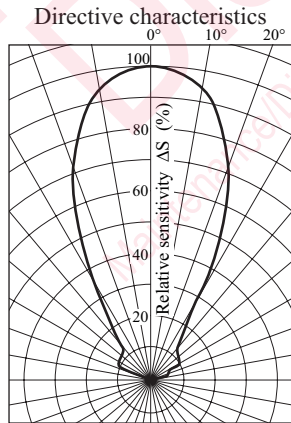
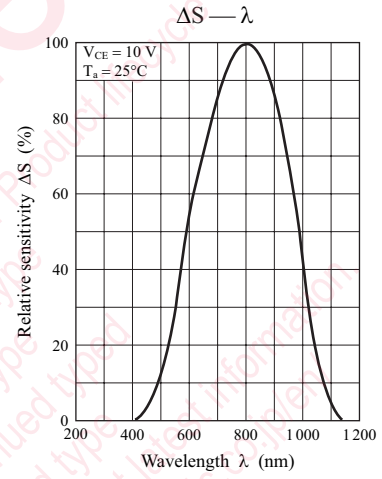
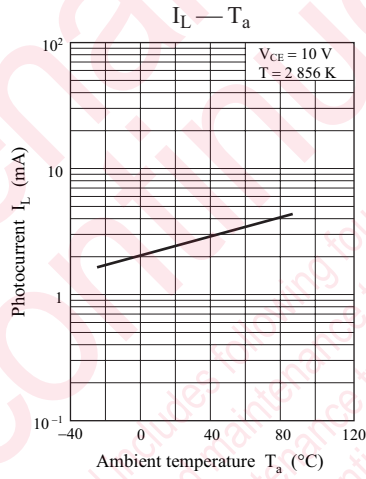
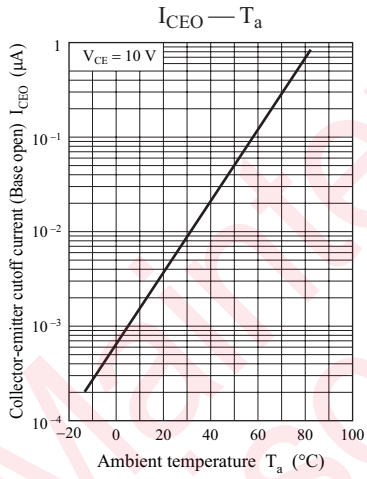
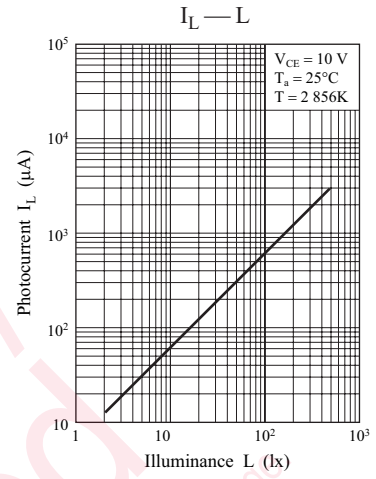
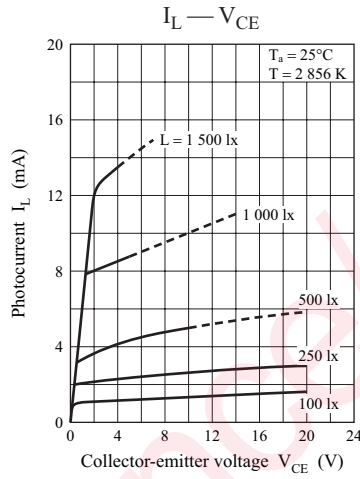
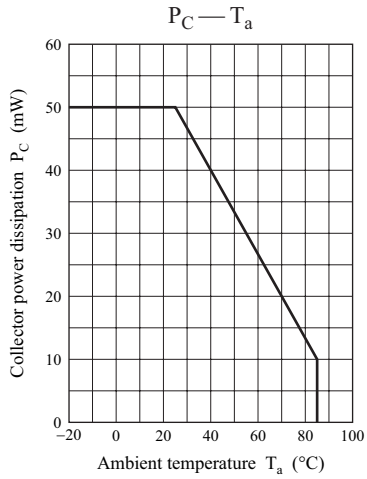
*2: Rank classification

Rank	Q	R	S
$I_{L1} (\mu A)$	3.0 to 11.0	7.0 to 24.0	16.0 <

*3: Switching time measurement circuit

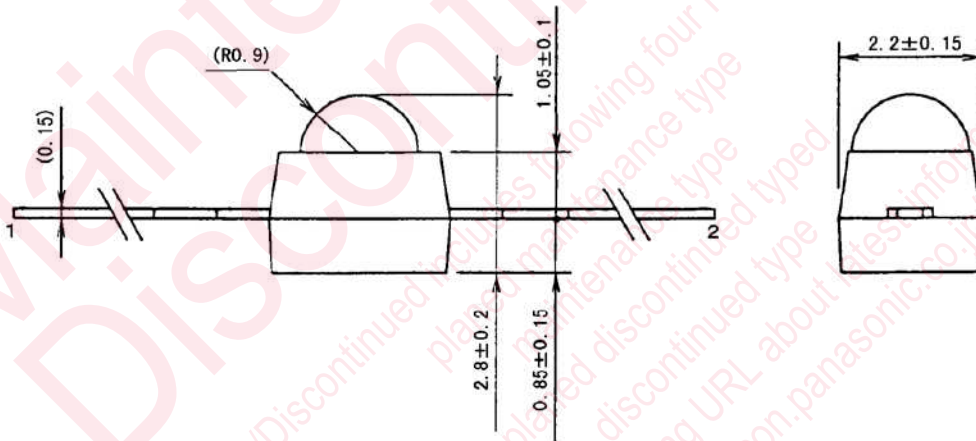
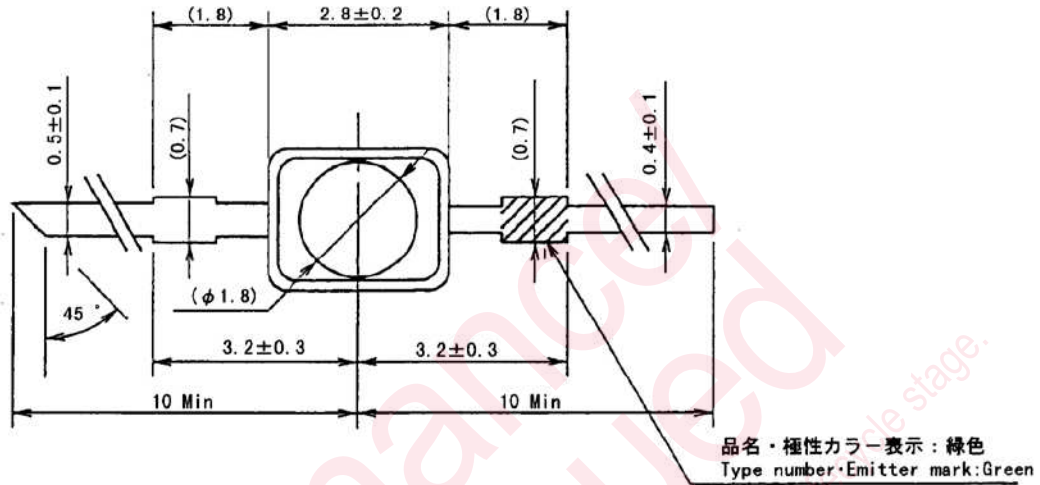


Note) The part number in the parenthesis shows conventional part number.



■ Package (Unit: mm)

LPDLTN2S0001



(注1) 色表示は、目視又は顕微鏡に於いて解読できる事。
(Note1) What a color mark sees an attention and can decode in a microscope.

- Pin name
- 1: Collector
- 2: Emitter

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