

# PNA2W01M (PN207)

## Silicon planar type

For optical control systems

### ■ Features

- High sensitivity
- Easy to combine with red and infrared light emitting diodes
- Small size designed for easier mounting to printed circuit board

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

Parameter	Symbol	Rating	Unit
Collector-emitter voltage (Base open)	$V_{\text{CEO}}$	20	V
Emitter-collector voltage (Base open)	$V_{\text{ECO}}$	5	V
Collector current	$I_{\text{C}}$	30	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	$^\circ\text{C}$

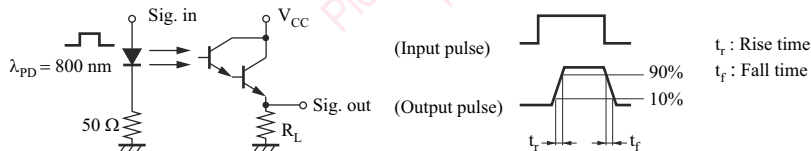
### ■ Electrical-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Photocurrent *1	$I_{\text{L}}$	$V_{\text{CE}} = 10 \text{ V}, L = 2 \text{ lx}$	0.5	3.0		mA
Collector-emitter cutoff current (Base open)	$I_{\text{CEO}}$	$V_{\text{CE}} = 10 \text{ V}$		0.1	0.5	$\mu\text{A}$
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{L}} = 1 \text{ mA}, L = 100 \text{ lx}$		0.7	1.5	V
Peak sensitivity wavelength *1	$\lambda_{\text{PD}}$	$V_{\text{CE}} = 10 \text{ V}$		800		nm
Half-power angle	$\theta$	The angle when the photocurrent is halved		18		$^\circ$
Rise time *2	$t_{\text{r}}$	$V_{\text{CC}} = 10 \text{ V}, I_{\text{L}} = 5 \text{ mA}, R_{\text{L}} = 100 \Omega$		200		$\mu\text{s}$
Fall time *2	$t_{\text{f}}$			200		$\mu\text{s}$

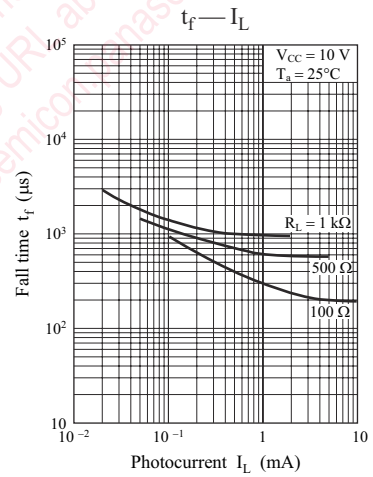
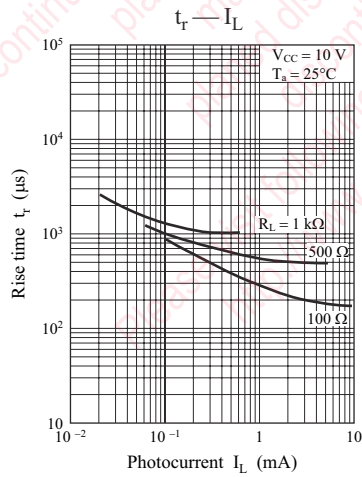
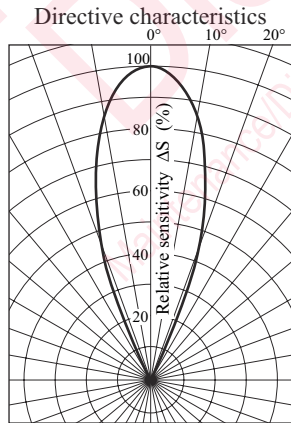
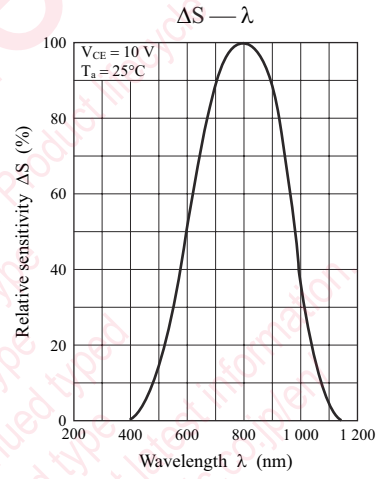
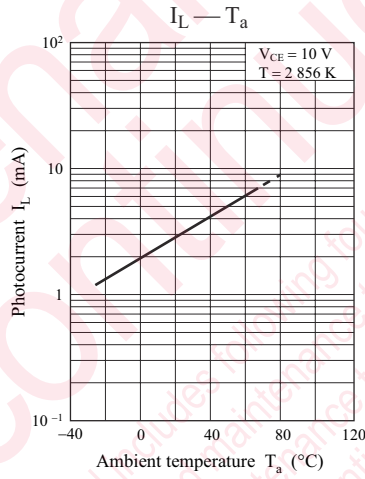
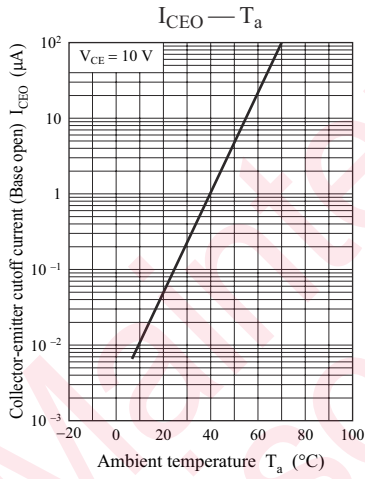
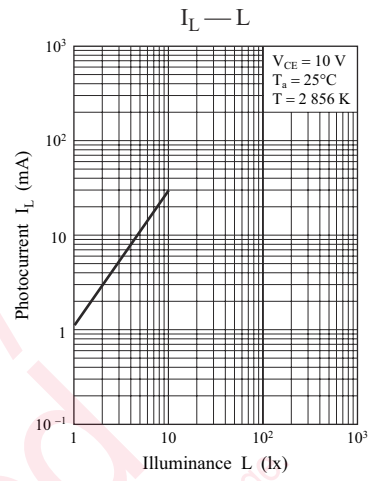
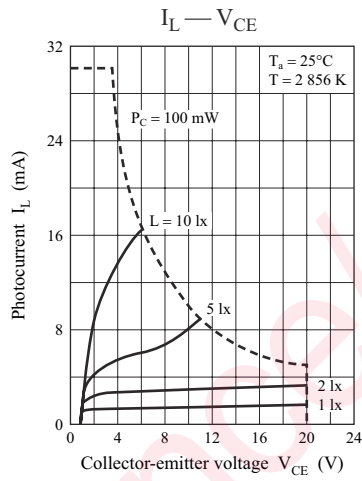
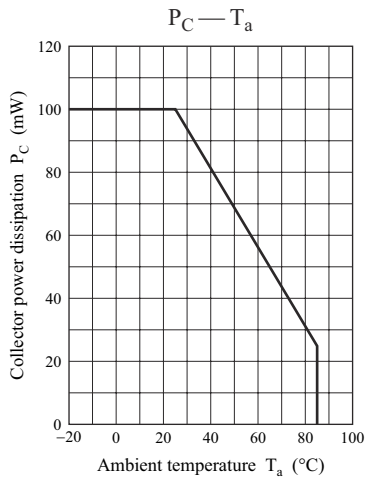
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

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.





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