

# PN312E

## Si PIN Dual Photodiode

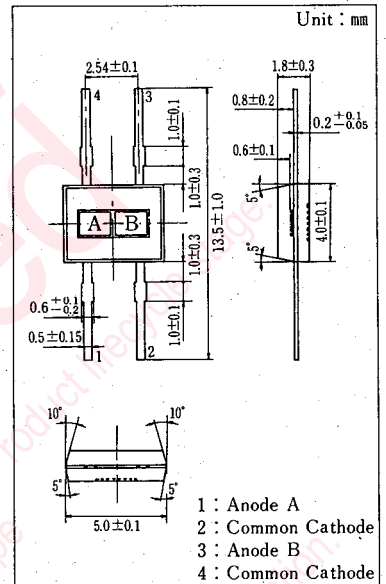
### Optical Information Systems

#### ■ Features

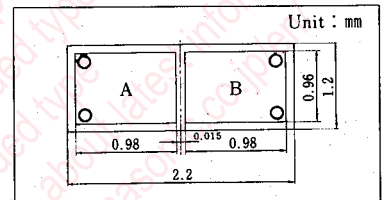
- Fast response:  $t_r, t_f=10\text{ns}$  (typ.)
- Good linearity of photo current
- Low dark current:  $I_D=10\text{nA}$  (max.)
- High sensitivity, high reliability
- Small package (Flat type)

#### ■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Value	Unit
Reverse Voltage (DC)	$V_R$	30	V
Power Dissipation	$P_D$	30	mW
Operating Ambient Temperature	$T_{opr}$	-25~+85	°C
Storage Temperature	$T_{stg}$	-30~+100	°C



#### ■ Dimensions



#### ■ Electro-Optical Characteristics (Ta=25°C)

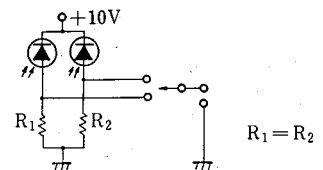
Item	Symbol	Condition	min.	typ.	max.	Unit
Reverse Voltage (DC)	$V_R$	$I_R = 10\mu\text{A}$	30			V
Dark Current	$I_D$	$V_R = 10\text{V}$			10	nA
Photo Current	$I_L^{*3}$	$V_R = 10\text{V}, L = 1000\text{lx}^{*1}$	7	10		$\mu\text{A}$
		$V_R = 10\text{V}, \lambda = 900\text{nm}, E = 1\text{mW}/\text{cm}^2$		7		$\mu\text{A}$
Peak Sensitivity Wavelength	$\lambda_p$	$V_R = 10\text{V}$		900		nm
Response Time	$t_r, t_f^{*2}$	$V_R = 10\text{V}, R_L = 1\text{k}\Omega$		10		ns
Capacitance between Terminals	$C_t$	$V_R = 10\text{V}, f = 1\text{MHz}$		3		pF
Acceptance Half Angle	$\theta$	Measured from the optical axis to the half power point		65		deg.

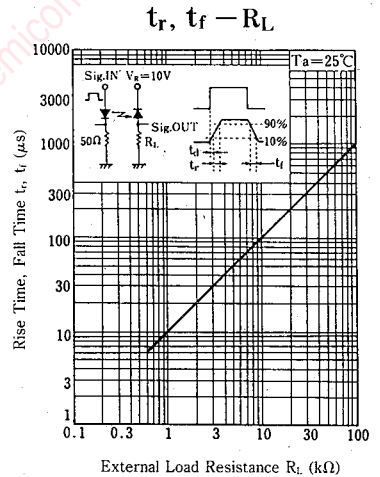
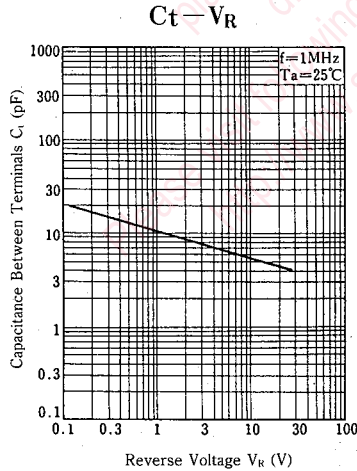
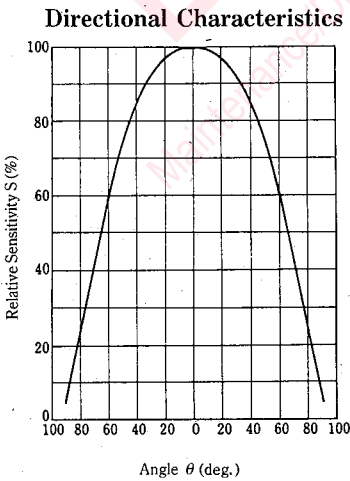
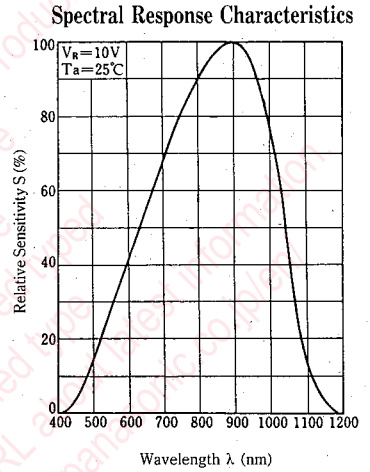
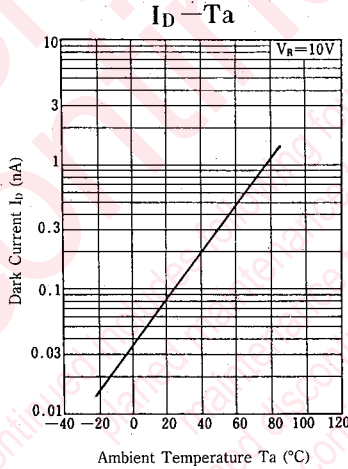
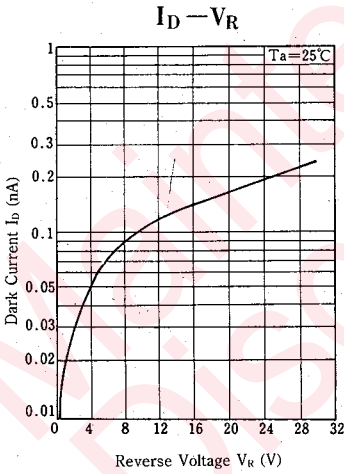
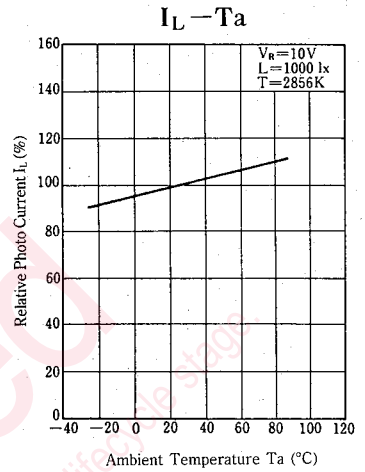
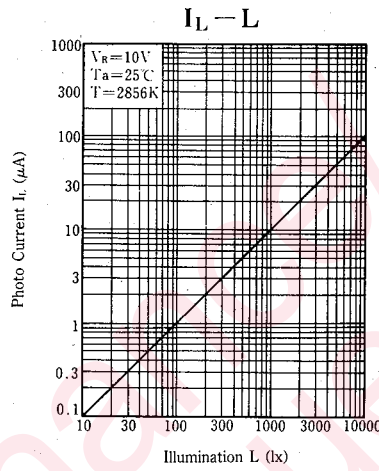
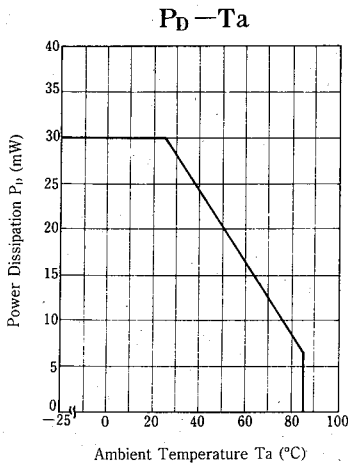
Note) Maximum Ratings and Characteristics are specified per each element.

\*1 Source: Tungsten 2856K

\*2 Source: Laser Diode  $\lambda=800\text{nm}$

\*3 Photo Current Measuring Circuit





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