

PNZ126S

Silicon NPN Phototransistor

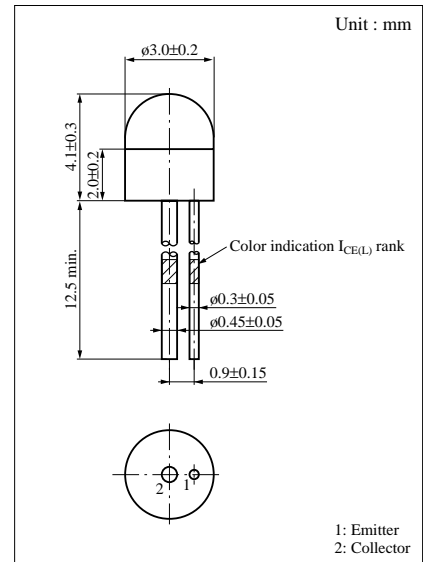
For optical control systems

■ Features

- High sensitivity
- Good collector photo current linearity with respect to optical power input
- Fast response : $t_r = 2.5 \mu\text{s}$ (typ.)
- Small size ($\phi 3$) ceramic package

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

Parameter	Symbol	Ratings	Unit
Collector to emitter voltage	V_{CEO}	20	V
Emitter to collector voltage	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	$^\circ\text{C}$
Storage temperature	T_{stg}	-30 to +100	$^\circ\text{C}$

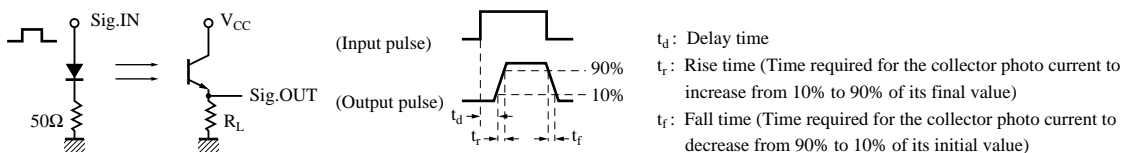


■ Electro-Optical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Dark current	I_{CEO}	$V_{\text{CE}} = 10\text{V}$		1	100	nA
Collector photo current	$I_{\text{CE(L)}}^{*3}$	$V_{\text{CE}} = 10\text{V}, L = 1000 \text{ lx}^{*1}$	1050		2560	μA
Peak sensitivity wavelength	λ_{p}	$V_{\text{CE}} = 10\text{V}$		800		nm
Acceptance half angle	θ	Measured from the optical axis to the half power point		30		deg.
Rise time	t_r^{*2}	$V_{\text{CC}} = 10\text{V}, I_{\text{CE(L)}} = 1\text{mA}, R_{\text{L}} = 100\Omega$		2.5		μs
Fall time	t_f^{*2}			3.5		μs

*1 Measurements were made using a tungsten lamp (color temperature $T = 2856\text{K}$) as a light source.

*2 Switching time measurement circuit



*3 $I_{\text{CE(L)}}$ Classifications

Class	Q	R	S	T	U
$I_{\text{CE(L)}} (\mu\text{A})$	1050 to 1350	1260 to 1580	1480 to 1860	1730 to 2180	2030 to 2560
Color indication	Brown	Yellow	Pink	Black	Red

