

PT4120

Thin Flat Type Double Phase Phototransistor

Features

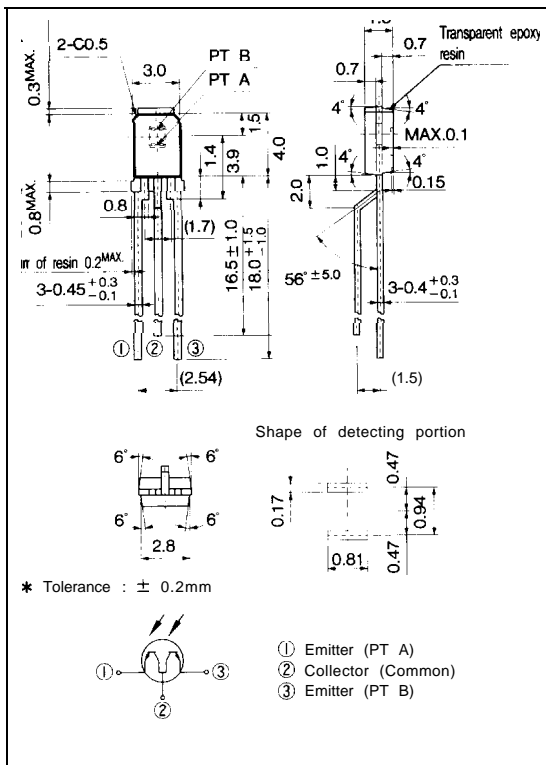
1. Double phase type
(Distance between PT A and PT B : 0.94mm)
2. Compact flat package
(Capacitance : 1/3 or more than PT410)

Applications

1. Mouse/trackballs
2. Encoders

Outline Dimensions

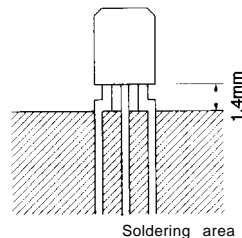
(Unit : mm)



5
Photo-transistors

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Collector -emitter voltage	V_{CE0}	35	V
Emitter-collector voltage	V_{ECO}	6	V
Collector current	I_C	20	mA
Collector power dissipation	P_c	75	mW
Operating temperature	T_{opr}	-25 to +85	°C
Storage temperature	T_{stg}	-40 to +85	°C
*1 Soldering temperature	T_{sol}	260	°C



*1 For MAX, 5 seconds at the position of 1.4mm from the resin edge

■ Electro-optical Characteristics

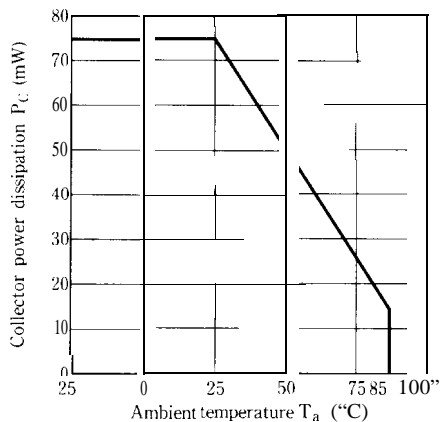
(Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX	Unit
Collector current	I_C	*2 $E_V = 1\ 000\text{lX}$ $V_{CE} = 5\text{V}$	0.45	—	1.8	mA
Collector dark current	I_{CEO}	*2 $E_e = 0, V_{CE} = 20\text{V}$	—	—	0.1	UA
Collector-emitter saturation voltage	$V_{CE(sat)}$	*2 $E_V = 1\ 000\text{lX}$ $I_C = 0.1\text{mA}$	—	0.1	0.4	V
Collector -emitter breakdown voltage	BV_{CEO}	$I_C = 0.1\text{mA}$ *2 $E_e = 0$	35	—	—	V
Emitter-collector breakdown voltage	BV_{ECO}	$I_E = 0.01\text{mA}$ *2 $E_e = 0$	6	—	—	V
Peak sensitivity wavelength	λ_P		—	800	—	nm
Response time	Rise time	$V_{CE} = 2\text{V}, I_C = 2\text{mA}$ $R_L = 100\Omega$	—	3.0	—	μs
	Fall time		—	3.5	—	μs
I_C difference between 2 chips	R	$I_{C(a)}/I_{C(b)}$	0.7	—	1.3	

*2 E_V, E_C : Irradiance, Illuminance by CIE standard light source A (tungsten lamp)

*3 Terminals excepting measured terminal shall be ripened.

Fig. 1 Collector Power Dissipation vs. Ambient Temperature



. Please refer to the chapter "Precautions for Use." (Page 78 to 93)