

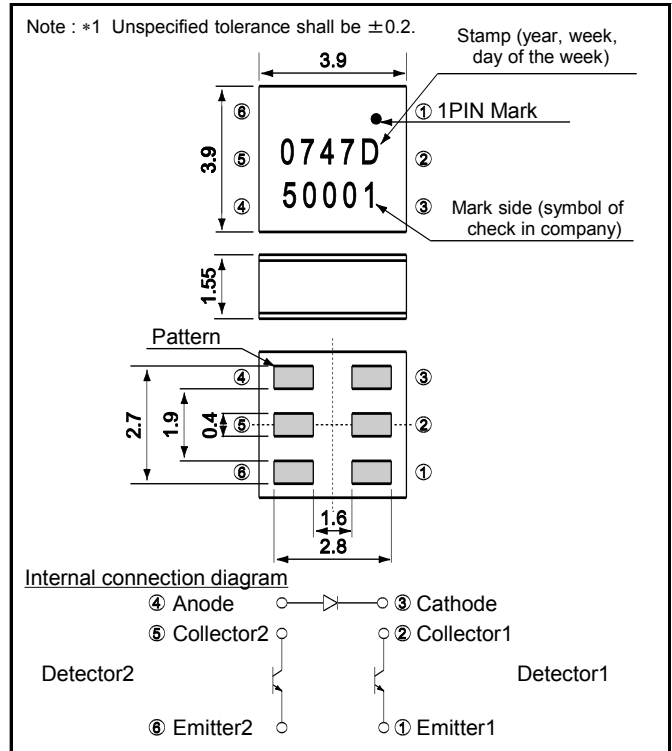
### ●Applications

- DSCs
- DVCs
- Projectors

### ●Features

- 1) Surface mount
- 2) Optical
- 3) 4-way detection possible

### ●Dimensions (Unit : mm)



### ●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Value	Unit
Input (Infrared light emitting diode)	Forward current	$I_F$	35	mA
	Reverse voltage	$V_R$	5	V
	Power dissipation	$P_D$	80	mW
Output (Phototransistor)	Collector-emitter voltage	$V_{CEO}$	30	V
	Emitter-collector voltage	$V_{ECO}$	4.5	V
	Collector current	$I_C$	30	mA
	Collector dissipation	$P_C$	80	mW
Operating temperature		$T_{opr}$	-25 to +85	°C
Storage temperature		$T_{stg}$	-30 to +85	°C

●Electrical and optical characteristics (Ta = 25°C)

1) Input characteristics

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Forward voltage	$V_F$	$I_F = 5\text{mA}$	-	1.35	1.6	V
Reverse current	$I_R$	$V_R = 5\text{V}$	-	-	10	$\mu\text{A}$
Peak light emitting wavelength	$\lambda_p$	$I_F = 5\text{mA}$	-	850	-	nm

\* Non-coherent Infrared light emitting diode used.

2) Output characteristics

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Dark current	$I_{CED}$	$V_{CE} = 10\text{V}$	-	-	0.5	$\mu\text{A}$
Peak sensitivity wavelength	$\lambda_p$		-	800	-	nm

3) Transfer characteristics

Parameter	Symbol	Conditions	Values			Unit	
			Min.	Typ.	Max.		
Collector current	$I_C$	$V_{CE} = 5\text{V}$ $I_F = 5\text{mA}$	150	-	-	$\mu\text{A}$	
Leak current	$I_{leak}$	$V_{CE} = 5\text{V}$ $I_F = 5\text{mA}$	-	-	12	$\mu\text{A}$	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F = 20\text{mA}$ $I_C = 0.1\text{mA}$	-	-	0.4	V	
Response time	Rise time	$t_r$	$V_{CC} = 5\text{V}, I_F = 20\text{mA}$	-	10	-	$\mu\text{s}$
	Fall time	$t_f$		$R_L = 100\Omega$	-	10	

●Electrical and optical characteristic curves

Fig.1 Collector Current vs. Forward Current

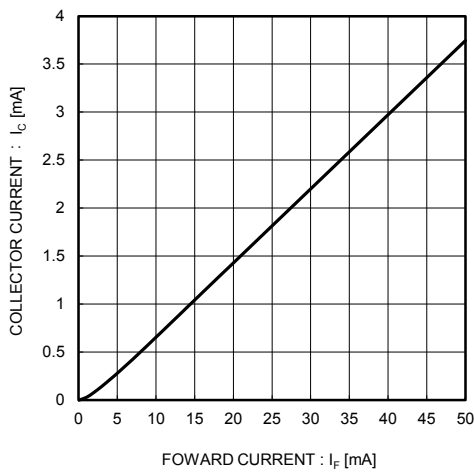


Fig.2 Dark Current vs. Forward Current

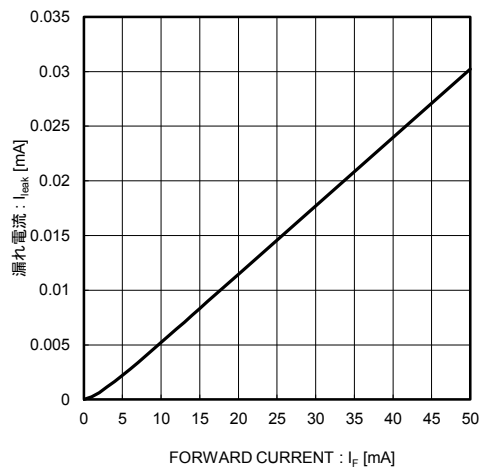


Fig.3 Forward Current vs. Forward Voltage

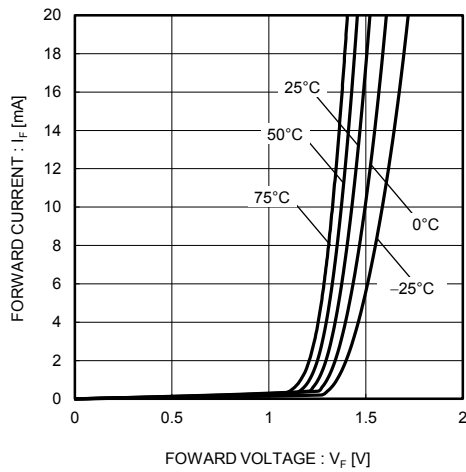


Fig.4 Relative Output vs. Ambient Temperature

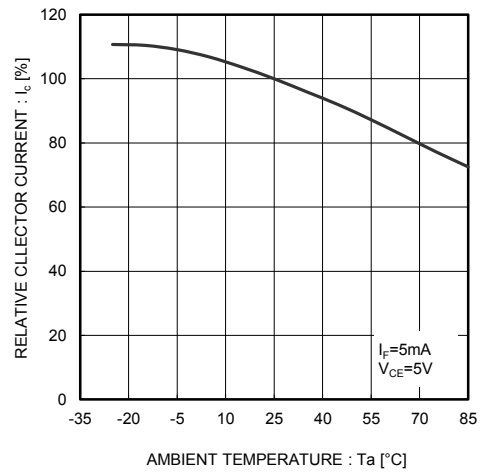


Fig.5 Forward Current Fall Off

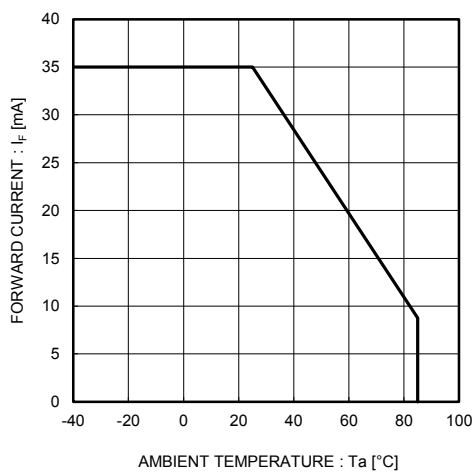
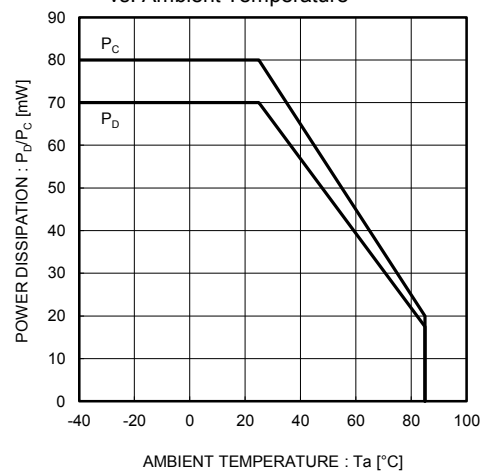


Fig.6 Power Dissipation/Collector Power Dissipation vs. Ambient Temperature



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