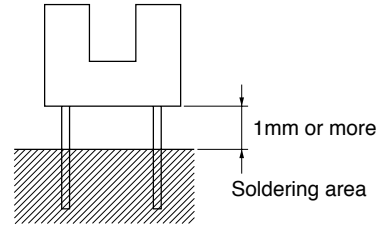


## ■ Absolute Maximum Ratings ( $T_a=25^{\circ}\text{C}$ )

Parameter		Symbol	Rating	Unit
Input	Forward current	$I_F$	50	mA
	Reverse voltage	$V_R$	6	V
	Power dissipation	P	75	mW
Output	Collector-emitter voltage	$V_{CEO}$	35	V
	Emitter-collector voltage	$V_{ECO}$	6	V
	Collector current	$I_C$	20	mA
	Collector power dissipation	$P_C$	75	mW
Total power dissipation		$P_{tot}$	100	mW
Operating temperature		$T_{opr}$	-25 to +85	$^{\circ}\text{C}$
Storage temperature		$T_{stg}$	-40 to +100	$^{\circ}\text{C}$
*1 Soldering temperature		$T_{sol}$	260	$^{\circ}\text{C}$

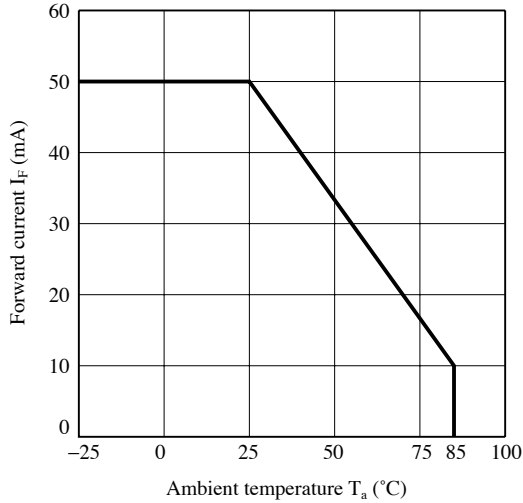
\*1 For 5s or less



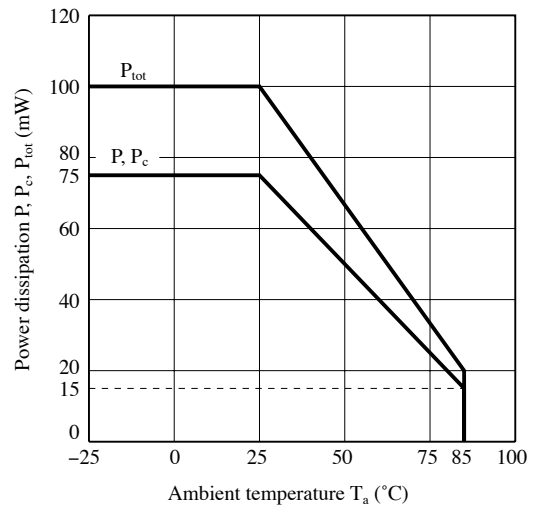
## ■ Electro-optical Characteristics ( $T_a=25^{\circ}\text{C}$ )

Parameter		Symbol	Condition	MIN.	TYP.	MAX.	Unit	
Input	Forward voltage	$V_F$	$I_F=20\text{mA}$	-	1.2	1.4	V	
	Reverse current	$I_R$	$V_R=3\text{V}$	-	-	10	$\mu\text{A}$	
Output	Collector dark current	$I_{CEO}$	$V_{CE}=20\text{V}$	-	-	100	nA	
Transfer characteristics	Collector current	$I_C$	$V_{CE}=5\text{V}, I_F=5\text{mA}$	40	-	400	$\mu\text{A}$	
	Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F=10\text{mA}, I_C=40\mu\text{A}$	-	-	0.4	V	
	Response time	Rise time	$t_r$	$V_{CE}=5\text{V}, I_C=100\mu\text{A}, R_L=1\text{k}\Omega$	-	50	150	$\mu\text{s}$
		Fall time	$t_f$		-	50	150	$\mu\text{s}$

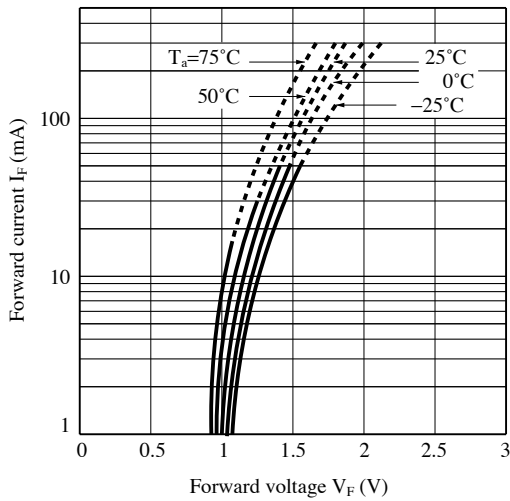
**Fig.1 Forward Current vs. Ambient Temperature**



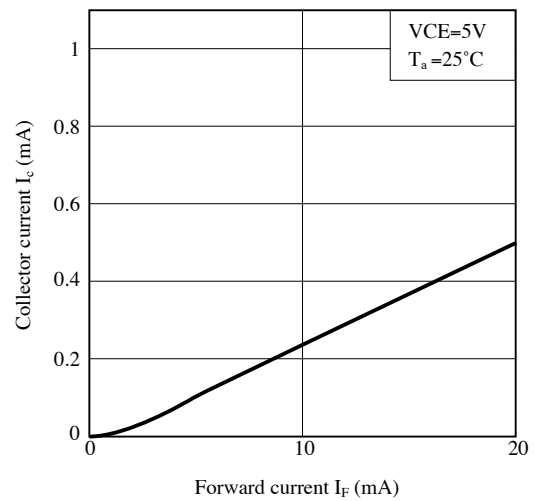
**Fig.2 Power Dissipation vs. Ambient Temperature**



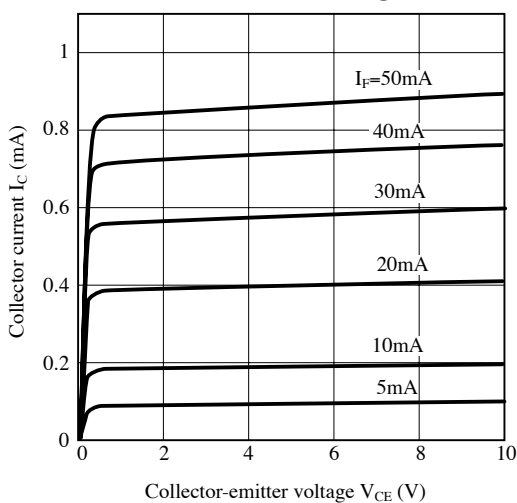
**Fig.3 Forward Current vs. Forward Voltage**



**Fig.4 Collector Current vs. Forward Current**



**Fig.5 Collector Current vs. Collector-emitter Voltage**



**Fig.6 Relative Collector Current vs. Ambient Temperature**

