

KPI-511

DESCRIPTION

The photointerrupter high-performance standard type KPI-511 combines a high-output GaAs IRED with a high sensitivity phototransistor.

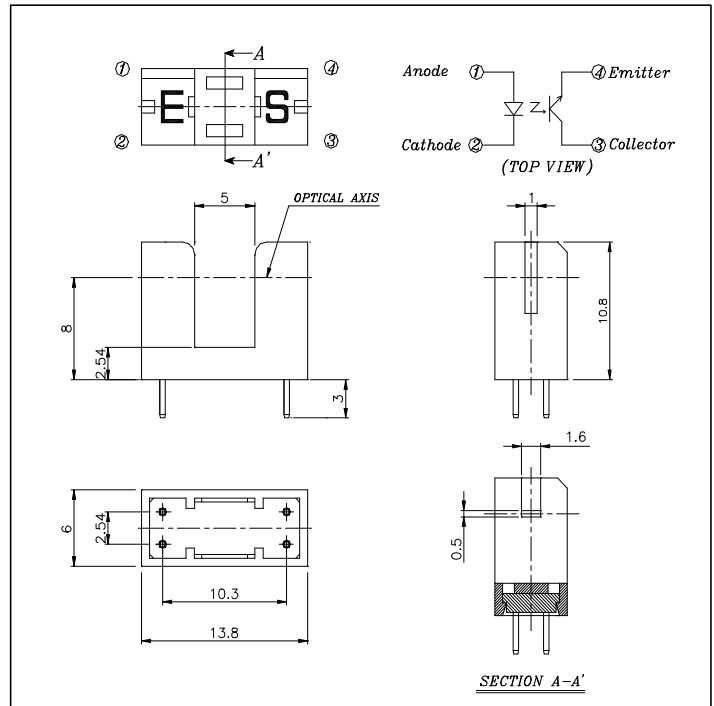
FEATURES

- PWB direct mount type
- GAP : 5.0mm

APPLICATIONS

- Printers
- Copiers
- A T M
- Ticket Vending Machines

DIMENSIONS



ABSOLUTE MAXIMUM RATINGS

(Ta=25 °C)

Parameter	Symbol	Rating	Unit
Input	Forward Current	I_F	60
	Pulse Forward Current ^{*1}	I_{FP}	1
	Reverse Voltage	V_R	5
	Power Dissipation	P_D	100
Output	Collector Emitter Voltage	V_{CEO}	30
	Emitter Collector Voltage	V_{ECO}	5
	Collector Current	I_C	40
	Collector Power Dissipation	P_C	100
Operating Temperature ^{*2}	T_{OPR}	-25 ~ +85	
Storage Temperature ^{*2}	T_{STG}	-40 ~ +85	
Soldering Temperature ^{*3}	T_{SOL}	260	

*1. Pulse width : t_w 100μsec, period : $T=10$ msec

*2. No icebound or dew

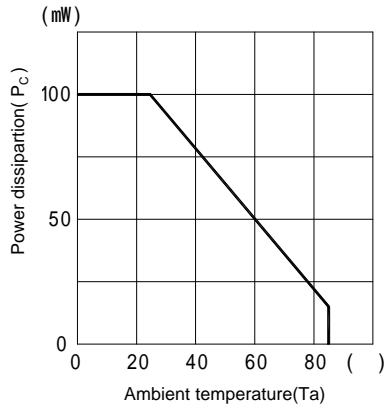
*3. For MAX. 5 seconds at the position of 1mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

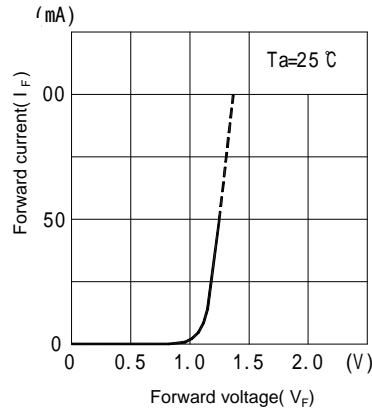
(Ta=25 °C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward Voltage	V_F	$I_F=20$ mA	-	1.2	1.7
	Reverse Current	I_R	$V_R=5$ V	-	-	10
	Capacitance	C_T	$f=1$ KHz	-	25	-
	Peak Wavelength	λ_P	-	-	940	-
Output	Dark Current	I_{CEO}	$V_{CE}=10$ V, 0 Lux	-	-	10
Coupled	Light Current	I_L	$V_{CE}=5$ V, $I_F=20$ mA (Non-shading)	0.5	-	15
	Collector Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_F=20$ mA, $I_C=0.1$ mA	-	-	0.4
	Response Time	Rise Time	$V_{CC}=5$ V, $I_C=2$ mA, $R_L=100$	-	5	-
		Fall Time		-	5	-

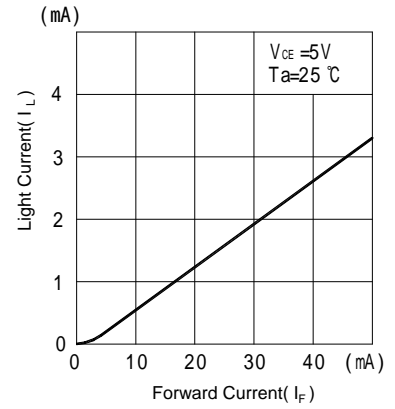
Collector power dissipation Vs. Ambient temperature



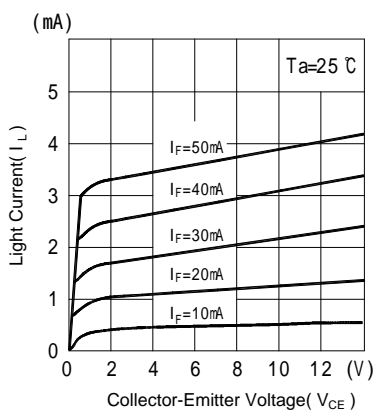
Forward current Vs. Forward voltage



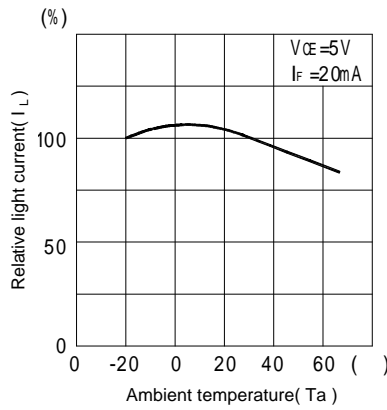
Light current Vs. Forward current



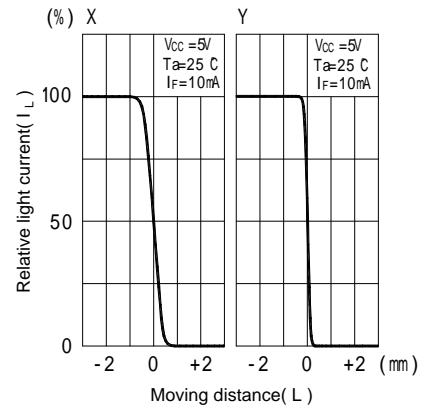
Light current Vs. Collector-Emitter voltage



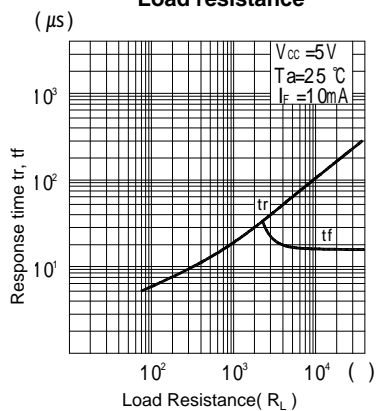
Relative light current Vs. Ambient temperature



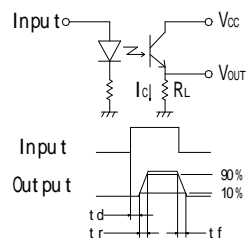
Dark current Vs. Ambient temperature



Switching time Vs. Load resistance



Response time measurement circuit



Method of measuring position

