

KPI-211

DESCRIPTION

The photointerrupter high-performance standard type KPI-211 combines a high-output GaAs IRED with a high sensitivity phototransistor.

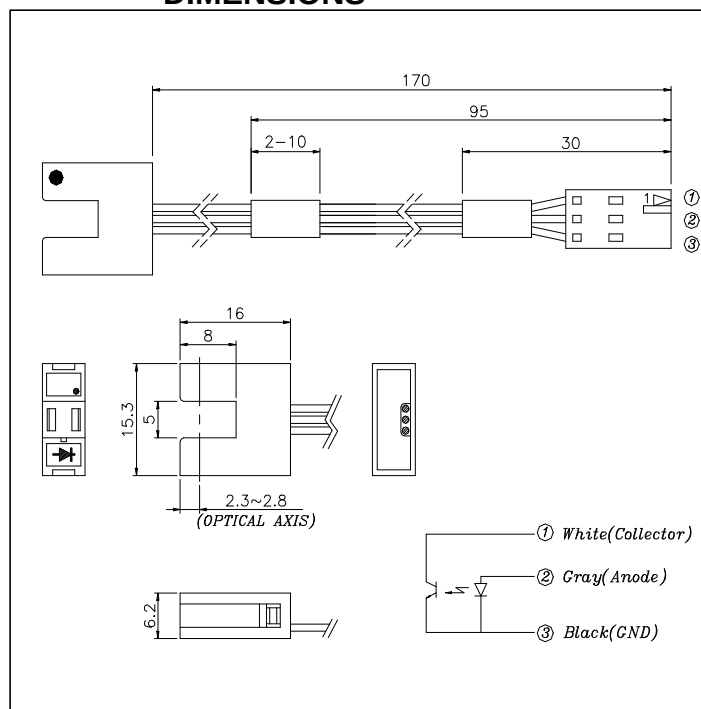
FEATURES

- 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 : $t_w \leq 100 \mu\text{sec}$, period : $T = 10\text{msec}$

*2. No icebound or dew

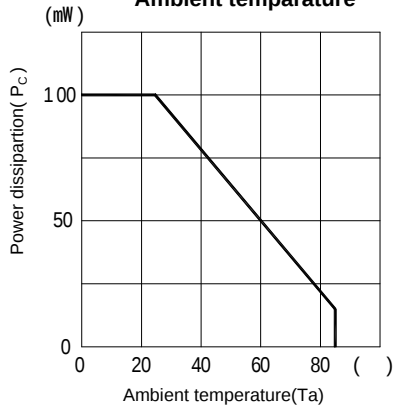
*3. For MAX. 5 seconds at the position of 1mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

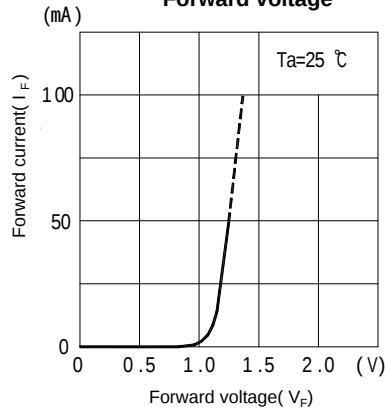
(Ta=25 °C)

Parameter			Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward Voltage		V _F	I _F =20mA	-	1.2	1.7	V
	Reverse Current		I _R	V _R =5V	-	-	10	μA
	Capacitance		C _T	f=1KHz	-	25	-	pF
	Peak Wavelength		λ _p	-	-	940	-	nm
Output	Dark Current		I _{CEO}	V _{CE} =10V, 0 Lux	-	-	10	μA
Coupled	Light Current		I _L	V _{CE} =5V, I _F = 20mA (Non-shading)	0.5	-	15	mA
	Leakage Current		I _{CEOD}	V _{CE} =5V, I _F = 20mA (shading)	-	-	10	μA
	Collector Emitter Saturation Voltage		V _{CE(SAT)}	I _F =20mA, I _C =0.1mA	-	-	0.4	V
	Response Time	Rise Time	tr	V _{CC} =5V, I _C =2mA, R _L =100Ω	-	5	-	μs
		Fall Time	tf		-	5	-	μs

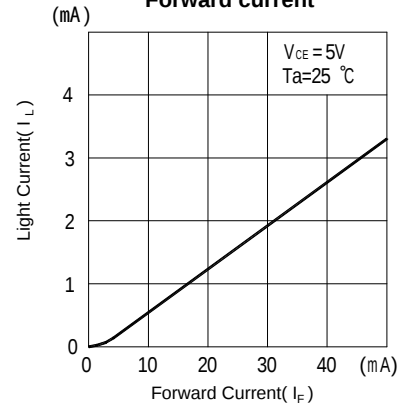
Collector power dissipation Vs. Ambient temperature



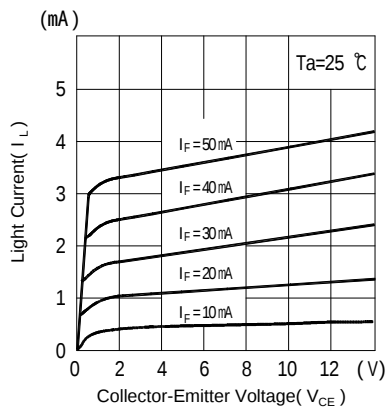
Forward current Vs. Forward voltage



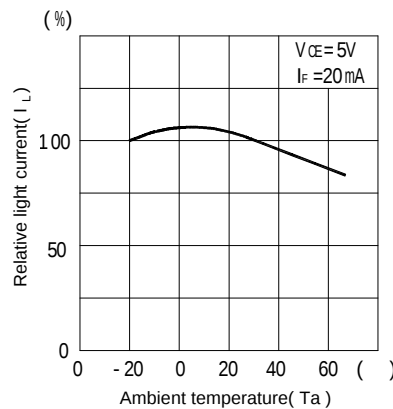
Light current Vs. Forward current



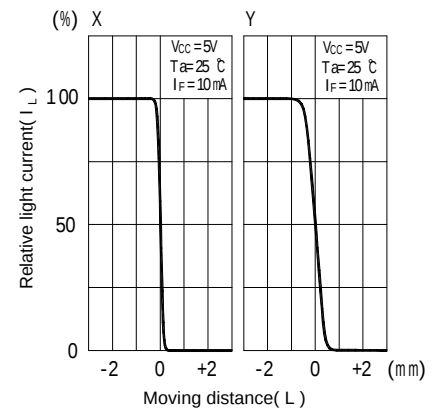
Light current Vs. Collector-Emitter voltage



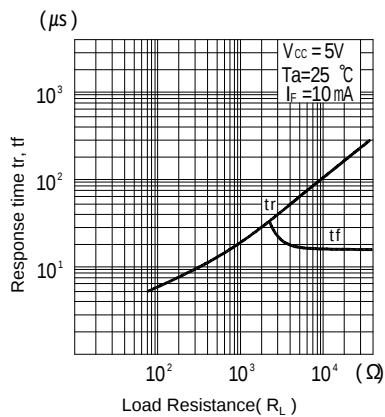
Relative light current Vs. Ambient temperature



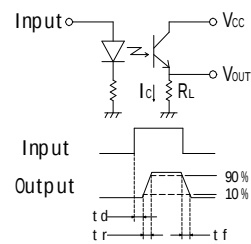
Relative light current Vs. Moving distance



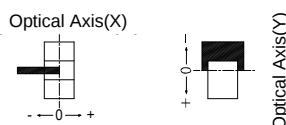
Switching time Vs. Load resistance



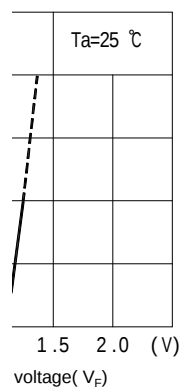
Response time measurement circuit



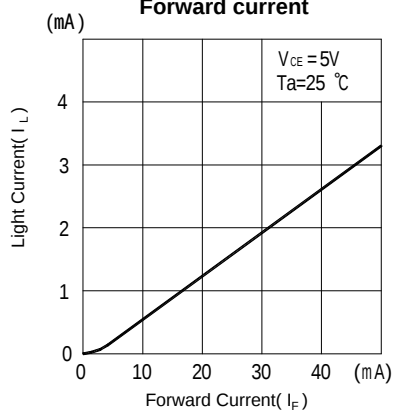
Method of measuring position detection characteristic



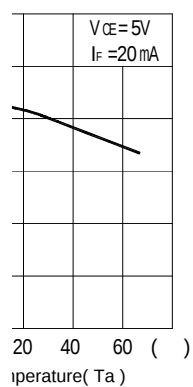
**d current Vs.
ard voltage**



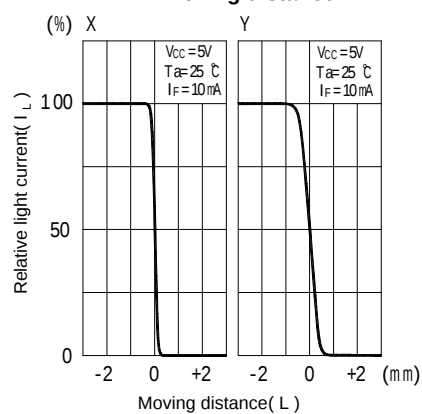
**Light current Vs.
Forward current**



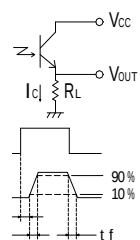
**Light current Vs.
Temperature**



**Relative light current Vs.
Moving distance**



Measurement circuit



Measuring position

Characteristic

