

KIT5016A

The KIT5016A photointerrupter high-performance standard type, combines high-output GaAs IRED with high sensitive phototransistor

FEATURES

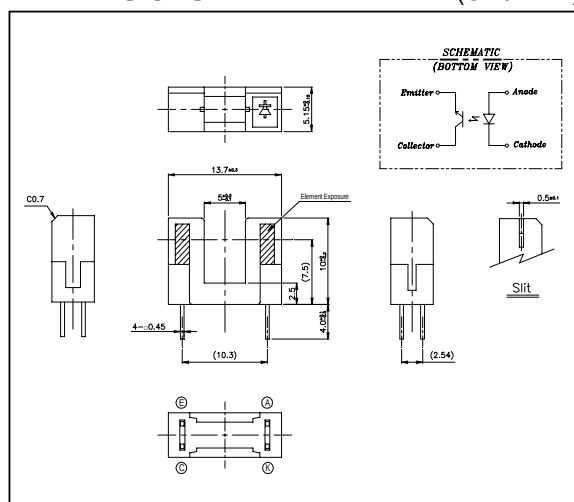
- PWB direct mount type
- GAP : 5.0mm

APPLICATIONS

- CD changers
- Reel rotation detection
- VTR
- Amusement machines

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25℃)

Item	Symbol	Rating	Unit
Input	Power dissipation	P _D	100
	Forward current	I _F	60
	Reverse voltage	V _R	5
	Pulse forward current *1	I _{FP}	1
Output	Collector dissipation	P _C	100
	Collector current	I _C	40
	Collector-Emitter voltage	V _{CEO}	30
	Emitter-Collector voltage	V _{ECO}	5
Rate of Decrease of Temp., for Forward Current *2		ΔI _F / Δt _a	-0.8
Rate of Decrease of Temp., for Collect Dissipation *2		ΔP _C / Δt _a	-0.33
Operating temp. *3		T _{opr.}	-20 ~ +85
Storage temp. *3		T _{stg.}	-30 ~ +85
Soldering temp. *4		T _{sol.}	260

*1. Pulse width : t_w ≤ 100 μs. period T=10ms *2. Ta ≥ 25℃ ~ Topr(max).

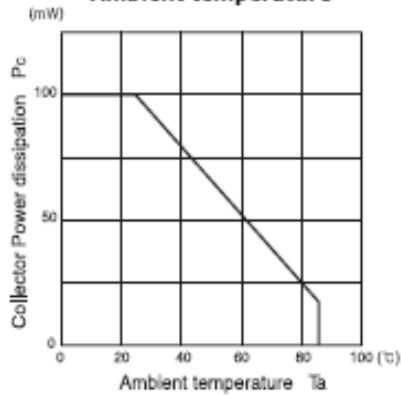
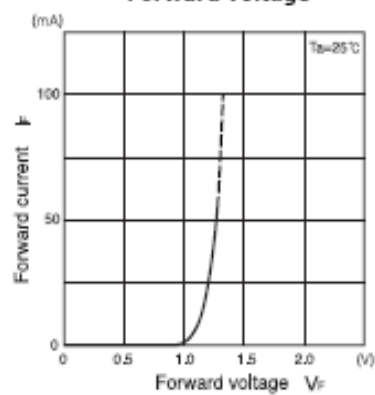
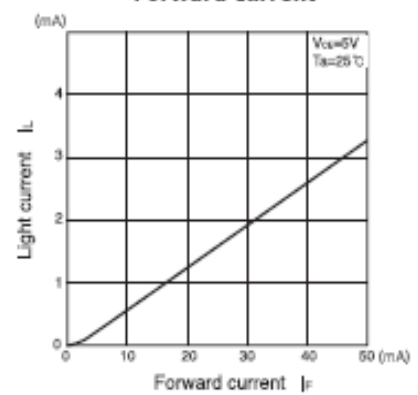
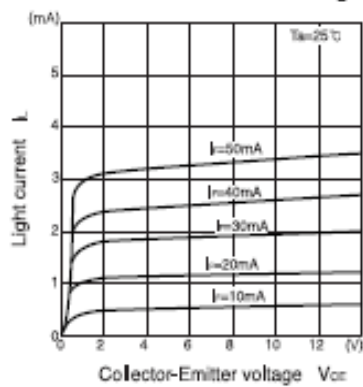
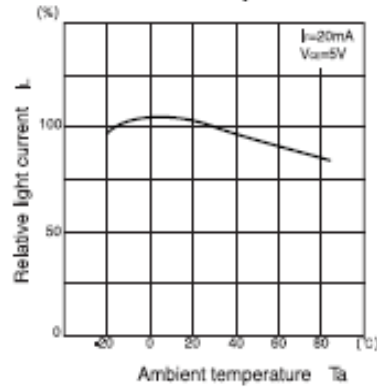
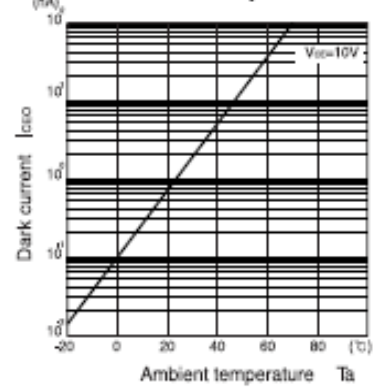
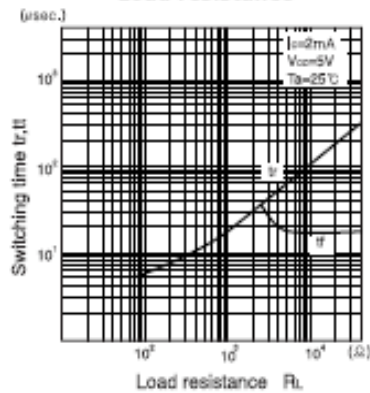
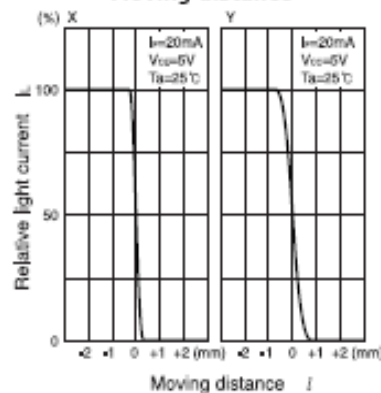
*3. No icebound or dew *4. The soldering should be 1mm away from bottom of the holder t = within 5sec.

ELECTRO-OPTICAL CHARACTERISTICS

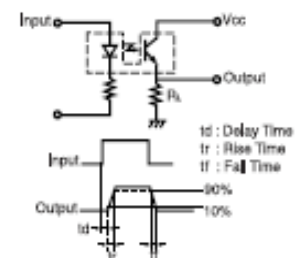
(Ta=25℃)

Item		Symbol	Conditions	Min.	Typ.	Max.	Unit.
Input	Forward voltage	V _F	I _F =20mA	-	1.2	1.4	V
	Reverse current	I _R	V _R =5V	-	-	10	uA
	Peak wavelength	λ _p	I _F =20mA	-	940	-	nm
Output	Dark current	I _{CEO}	V _{CE} =10V, 0 Lux	-	1	100	nA
	Peak sensor wavelength	λ _p	-	-	880	-	nm
Trans- mission	Light current	I _L	I _F =20mA, V _{CE} =5V, Non-shading	1.0	-	5.0	mA
	Leak currten	I _{CEOD}	I _F =20mA, V _{CE} =5V, shading	-	0.50	10	uA
	Collector-Emitter saturation voltage	V _{CE(sat)}	I _F =20mA, I _C =0.1mA	-	0.15	0.4	V
Rise time		tr	V _{CC} =5V, I _C =2mA, R _L =100Ω	-	4	-	μs
Fall time		tf		-	5	-	μs

KIT5016A

Collector power dissipation Vs.
Ambient temperatureForward current Vs.
Forward voltageLight current Vs.
Forward currentLight current Vs.
Collector-Emitter voltageRelative light current Vs.
Ambient temperatureDark current Vs.
Ambient temperatureSwitching time Vs.
Load resistanceRelative light current Vs.
Moving distance

Switching time measurement circuit

Method of measuring position
detection characteristic