



深圳东裕光大电子有限公司  
广州市东裕光电科技有限公司

# 产品规格书 SPECIFICATION

客户名称 CUSTOMER	
产品名称 PRODUCTION	红外接收管 Photo Transistor
产品型号 MODEL	KST-1KLB(DYWH)
版本号 VERSION NO	A1.0

地址(Add): 深圳市光明区凤凰街道光明大道 481 号乐府广场 1B 栋 1609

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客户确认 CUSTOMER CONFIRMATION	审核 CHECKED BY	编制 PREPARED BY
	周毅兴	陈少龙

The KST-1KLB(DYWH) is a high-sensitivity silicon phototransistor mounted in durable, hermetically sealed TO-18 metal can which provide years of reliable performance, even under demanding conditions such as use outdoors.

**FEATURES**

- Durable
- High reliability in demanding environments
- Two leads

**APPLICATIONS**

- Smoke detector
- Infrared sensors
- Optical switches
- Optical detectors

**MAXIMUM RATINGS**

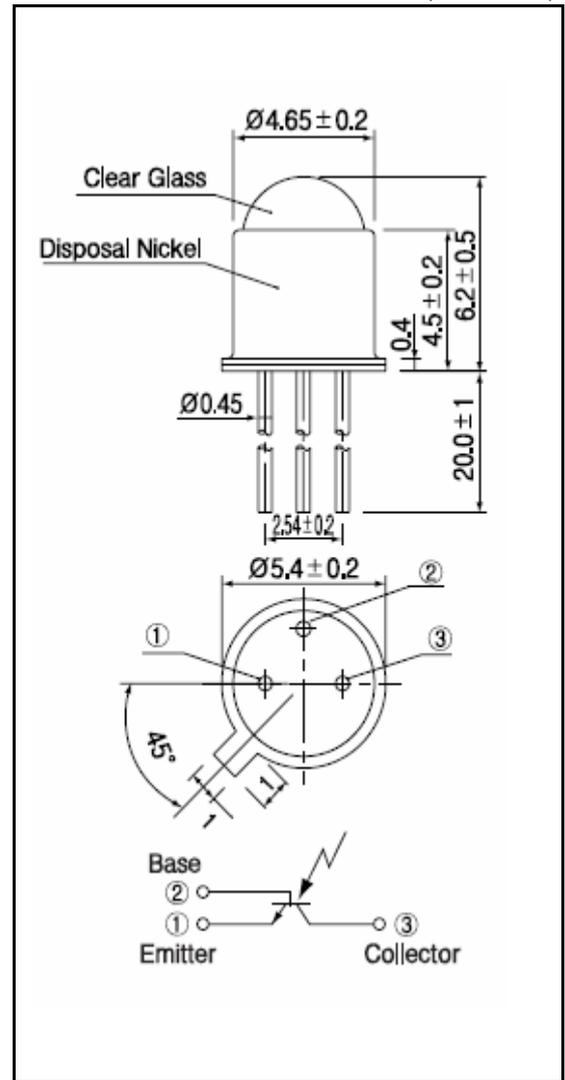
(Ta=25°C)

Parameter	Symbol	Rating	Unit
C-E Voltage	V <sub>CEO</sub>	40	V
E-C Voltage	V <sub>ECO</sub>	4	V
Collector current	I <sub>c</sub>	50	mA
Collector power dissipation	P <sub>c</sub>	150	mW
Operating Temperature	T <sub>opr</sub>	-30~+100	°C
Storage Temperature	T <sub>stg</sub>	-50~+150	°C
Soldering temperature *1	T <sub>sol</sub>	260	°C

Notes : \*1. For MAX.5 seconds at the position of 2mm from the package

**DIMENSION**

(Unit : mm)



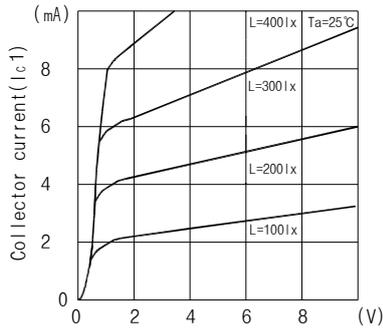
**ELECTRO-OPTICAL CHARACTERISTICS**

(Ta=25°C, unless otherwise noted)

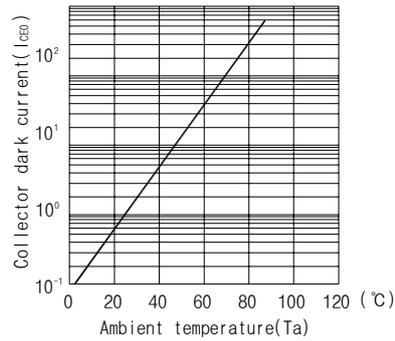
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector dark current	I <sub>CEO</sub>	V <sub>CEO</sub> =10V		1	200	nA
Light current	I <sub>L</sub>	V <sub>CE</sub> =10V, 200lx	1.8	6.0		mA
C-E Saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =5mA, 2000lx		0.2	0.4	V
Switching speeds	Rise time	V <sub>CC</sub> =10V, I <sub>c</sub> =5mA, R <sub>L</sub> =100Ω	-	8	-	μS
	Fall time		-	10	-	μS
Spectral sensitivity	λ		500~1050			nm
Peak Wavelength	λ <sub>p</sub>		-	880	-	nm
Half angle	ΘΔ		-	±15	-	deg.

Notes : \*2. Irradiance by CIE standard light source A (2850K tungsten lamp)

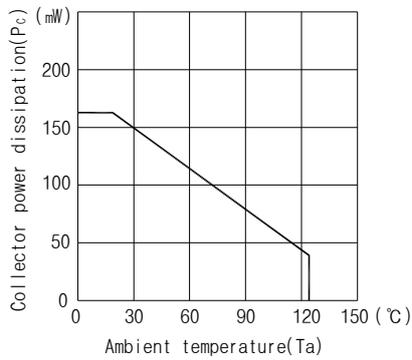
### Collector Current Vs. C-E Voltage



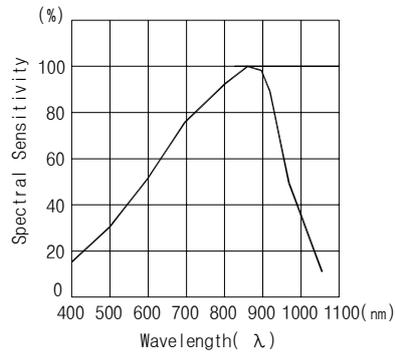
### Collector Dark Current Vs. Ambient Temperature



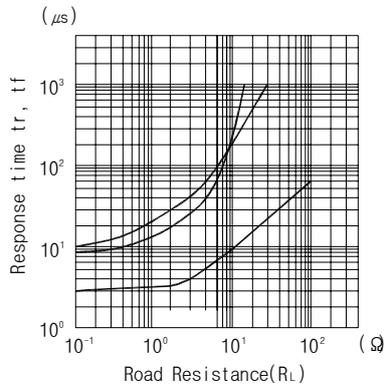
### Collector power dissipation Vs. Ambient Temperature



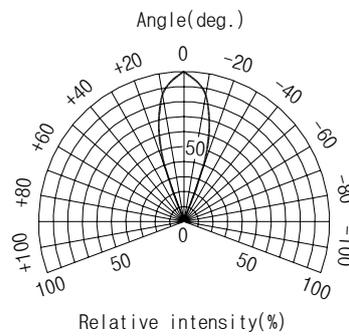
### Relative Sensitivity Vs. Wavelength



### Switching time Vs. Load resistance



### Radiant Pattern



### Switching time measurement circuit

