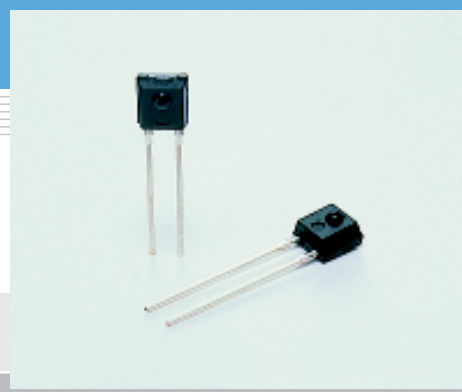


Phototransistor

S4404-01

High sensitivity phototransistor



S4404-01 is a high sensitivity phototransistor molded into a visible-cut plastic package.

Features

- Miniature plastic package with lens
- Visible-cut package
- High sensitivity: 2.8 mA (1000 lx)

Applications

- Tape start/end mark sensor for VTRs, cassette tape recorders, etc.
- Rotary encoders
- Touch screen

■ Absolute maximum ratings (Ta=25 °C)

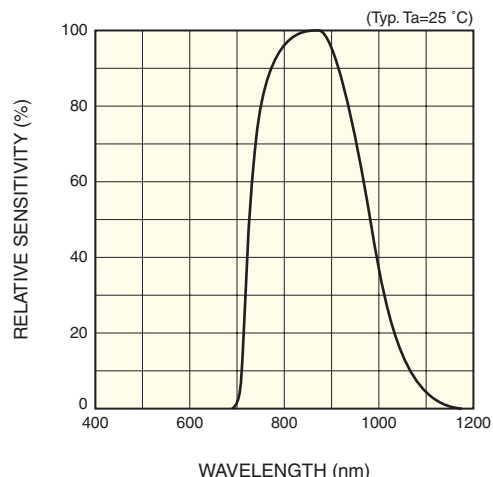
Parameter	Symbol	Value	Unit
Collector-emitter voltage	V _{CEO}	15	V
Emitter-collector voltage	V _{ECO}	4	V
Collector current	I _c	20	mA
Collector dissipation	P _c	80	mW
Operating temperature	T _{opr}	-30 to +85	°C
Storage temperature	T _{stg}	-40 to +100	°C
Soldering	-	260 °C, 3 s, at least 2.5 mm away from package surface	-

■ Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Photocurrent *	I _c	V _{CE} =5 V, 1000 lx	1.5	2.8	-	mA
Dark current	I _{CEO}	V _{CE} =15 V, 0 lx	-	-	100	nA
Collector-emitter saturation voltage	V _{CE (sat)}	I _c =0.5 mA, 1000 lx	-	-	0.4	V
Peak sensitivity wavelength	λ _p		-	870	-	nm
Rise time	t _r	V _{CC} =5 V, I _c =1 mA	-	6	30	μs
Fall time	t _f	R _L =100 Ω	-	8	30	μs

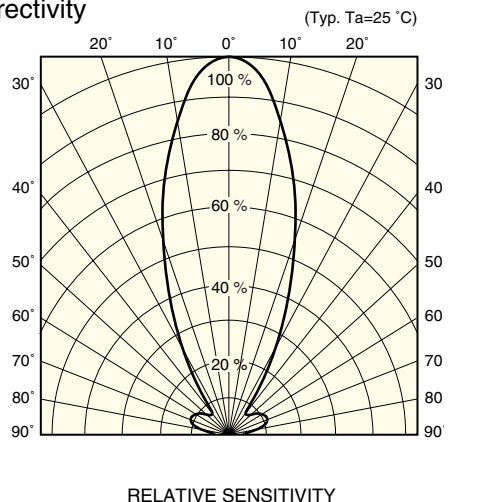
* Measured with a CIE standard "A" light source at 2856 K

Spectral response



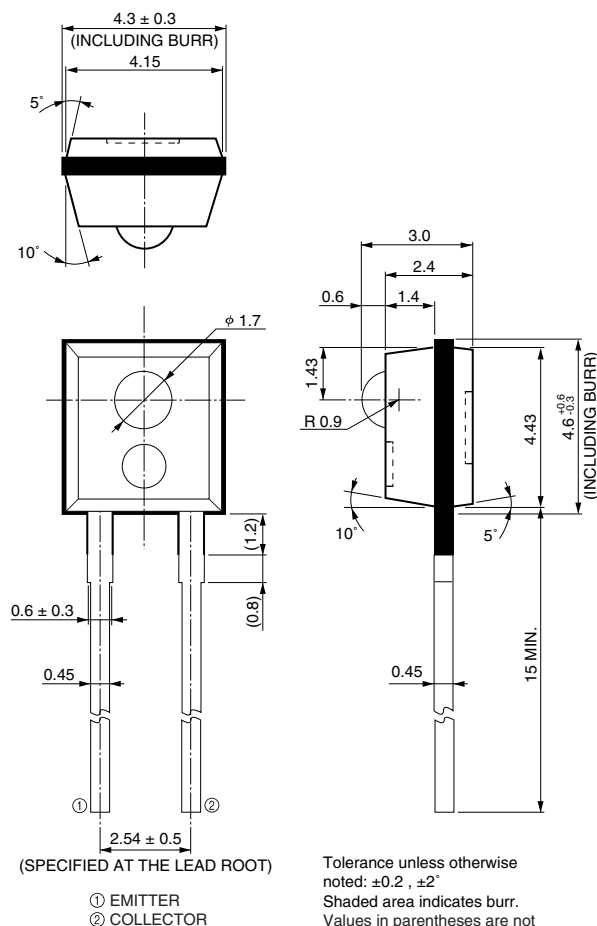
KPTRB0006EA

Directivity



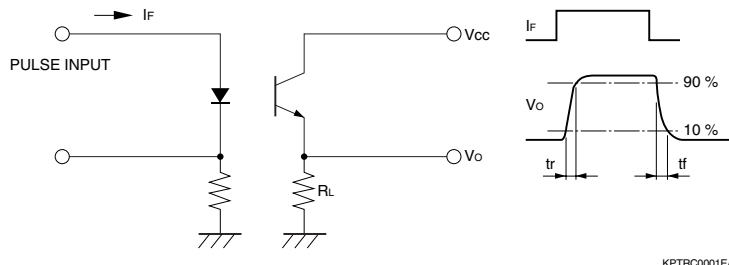
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Dimensional outline (unit: mm)

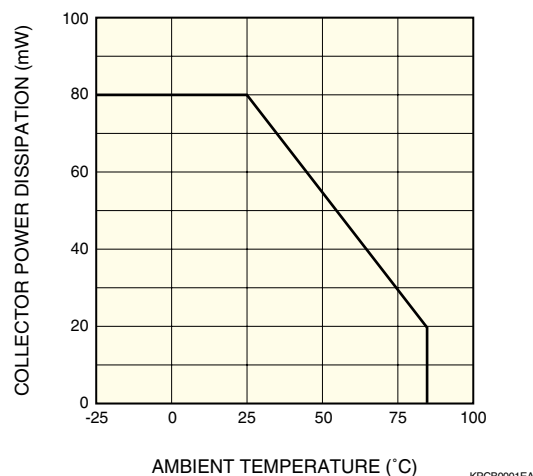


KPTRA0002EA

Response time measurement circuit



Collector power dissipation vs. ambient temperature



KPCB0001EA

HAMAMATSU

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