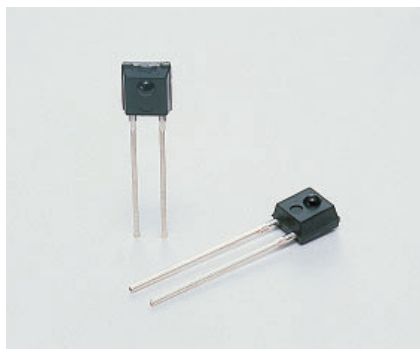


S4404-01



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: 2.5 mA (1000 lx)

Applications

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

Absolute maximum ratings (Ta=25 °C)

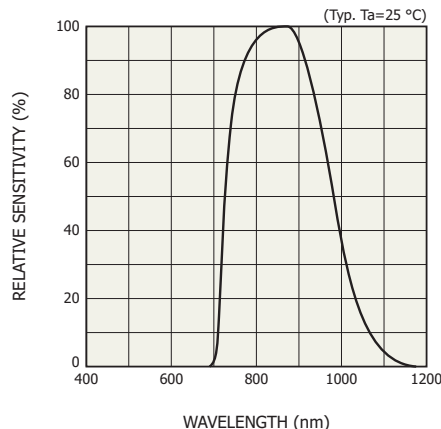
Parameter	Symbol	Value	Unit
Collector-emitter voltage	V _{CEO}	15	V
Emitter-collector voltage	V _{ECO}	4	V
Collector current	I _c	20	mA
Collector dissipation	P _c	80	mW
Operating temperature	T _{opr}	-30 to +85	°C
Storage temperature	T _{stg}	-40 to +100	°C
Soldering	-	260 °C, 3 s, at least 2.5 mm away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

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak sensitivity wavelength	λ _p		-	870	-	nm
Photocurrent *	I _c	V _{CE} =5 V, 1000 lx	1.5	2.5	-	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
Rise time	t _r	V _{CE} =5 V, I _c =1 mA	-	6	30	μs
Fall time	t _f	R _L =100 Ω	-	8	30	μs

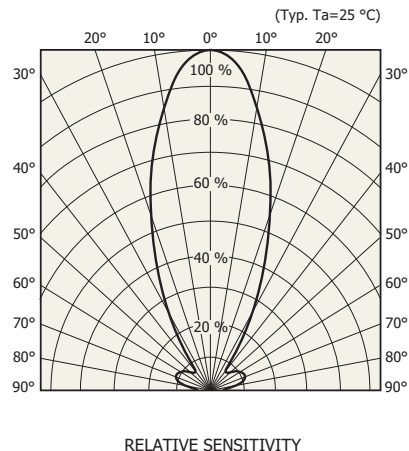
* Measured with a CIE standard "A" light source at 2856 K

Spectral response



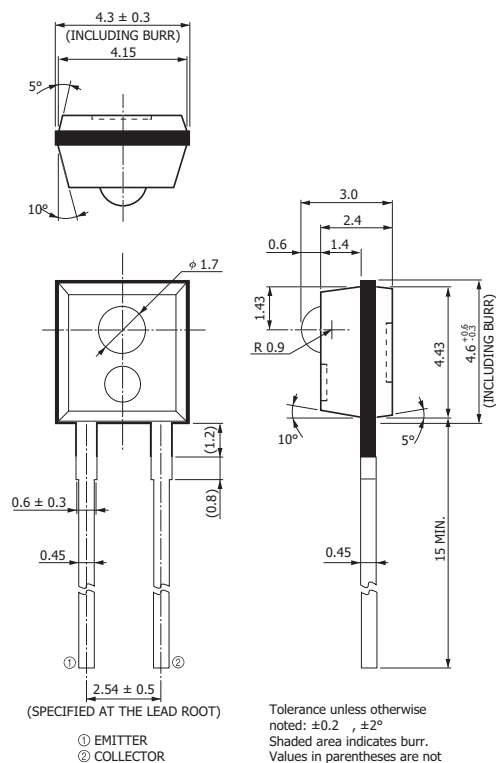
KPTRB0006EA

Directivity



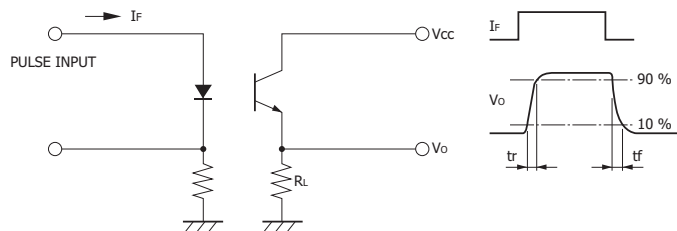
KPTRB0001EA

Dimensional outline (unit: mm)



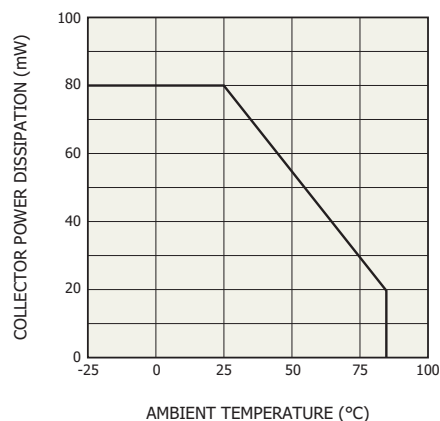
KPTRA0002EA

Response time measurement circuit



KPTRB0001EA

Collector power dissipation vs. ambient temperature



KPCB0001EA

Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions.

Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein.

Type numbers of products listed in the specification sheets or supplied as samples may have a suffix "(X)" which means tentative specifications or a suffix "(Z)" which means developmental specifications. ©2009 Hamamatsu Photonics K.K.

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