

S2829

Subminiature package phototransistor

The S2829 is a high sensitivity phototransistor molded into a visible-cut plastic package.

Features

- ➔ Subminiature plastic package with lens
- ➔ Visible-cut package
- ➔ High sensitivity: 1.8 mA (1000 lx)

Application

- ➔ Rotary encoders
- ➔ Touch screen

Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Condition	Value	Unit
Collector-emitter voltage	V _{CEO}		35	V
Emitter-collector voltage	V _{ECO}		4	V
Collector current	I _c		20	mA
Collector dissipation	P _c		80	mW
Operating temperature	T _{opr}	No dew condition*1	-25 to +85	°C
Storage temperature	T _{stg}	No dew condition*1	-40 to +100	°C
Soldering	-		260 °C, 3 s, at least 2.5 mm away from package surface	-

*1: When there is a temperature difference between a product and the surrounding area in high humidity environment, dew condensation may occur on the product surface. Dew condensation on the product may cause deterioration in characteristics and reliability.

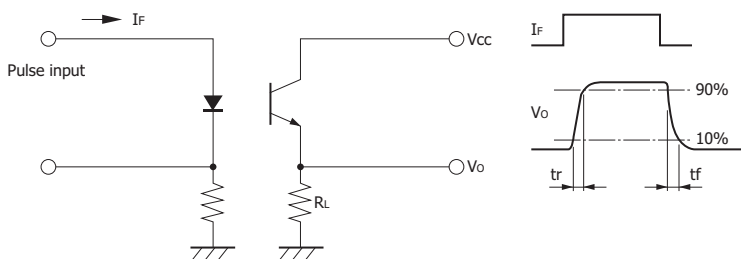
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Photocurrent*2	I _c	V _{CE} =5 V, 1000 lx	0.3	1.8	-	mA
Dark current	I _{CEO}	V _{CE} =20 V, 0 lx	-	-	100	nA
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =0.3 mA, 1000 lx	-	-	0.4	V
Peak sensitivity wavelength	λ _p		-	800	-	nm
Rise time	t _r	V _{CC} =5 V, I _c =1 mA	-	2	-	μs
Fall time	t _f	R _L =100 Ω	-	3	-	μs

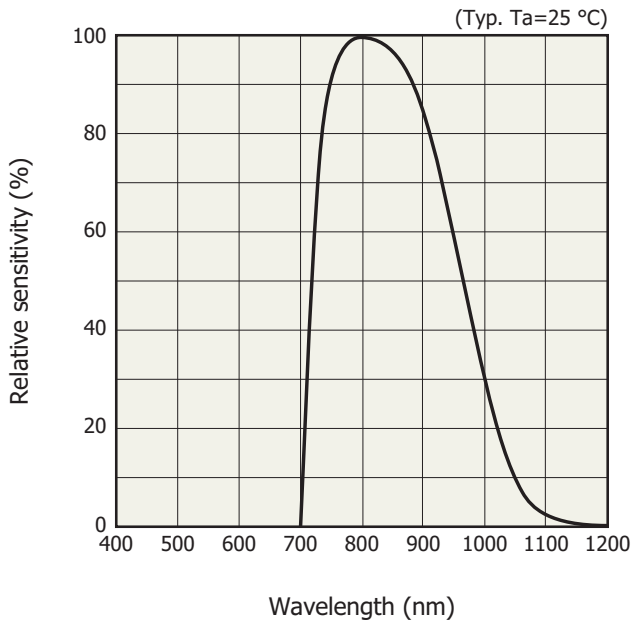
*2: Measured with a CIE standard "A" light source at 2856 K

Response time measurement circuit

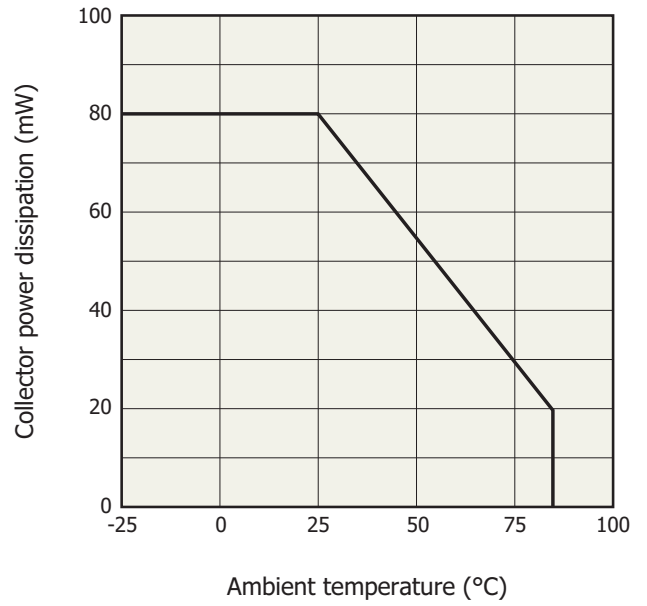


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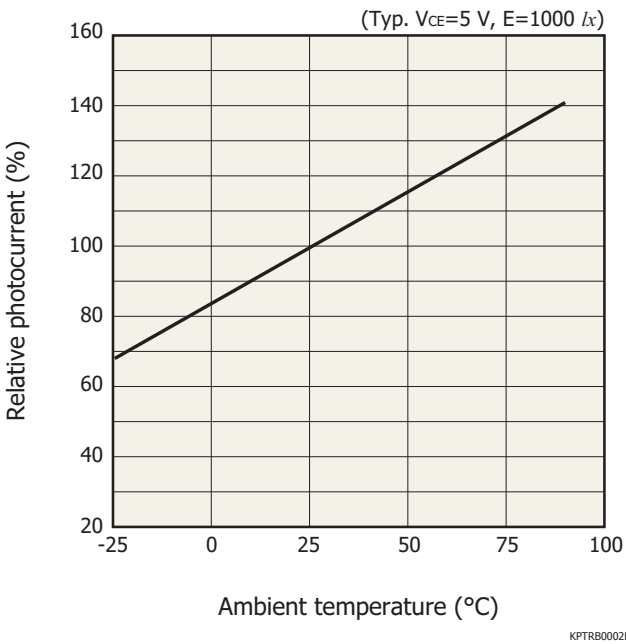
Spectral response



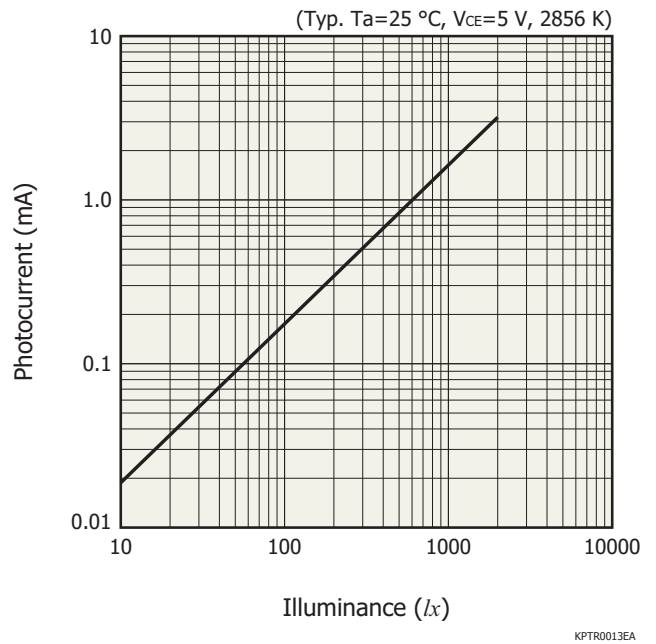
Collector power dissipation vs. ambient temperature



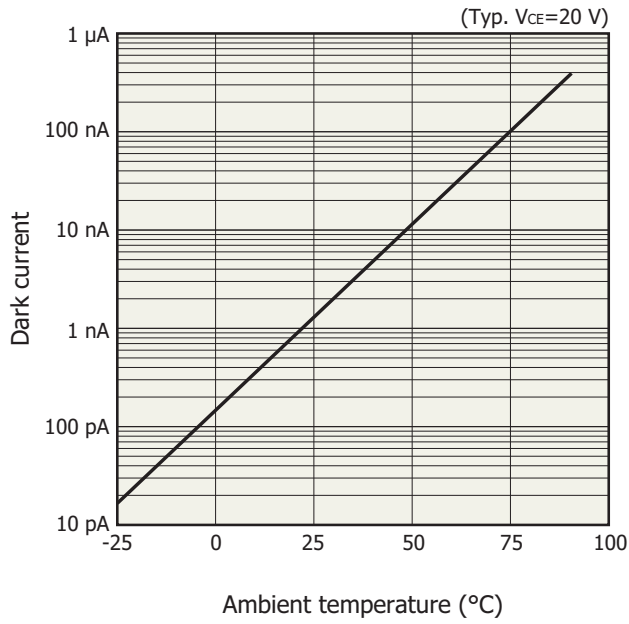
Photocurrent vs. ambient temperature



Photocurrent vs. illuminance

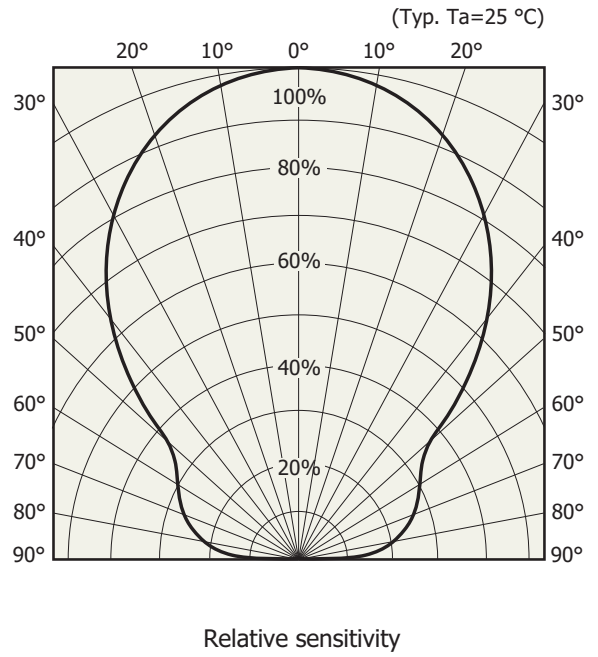


Dark current vs. ambient temperature



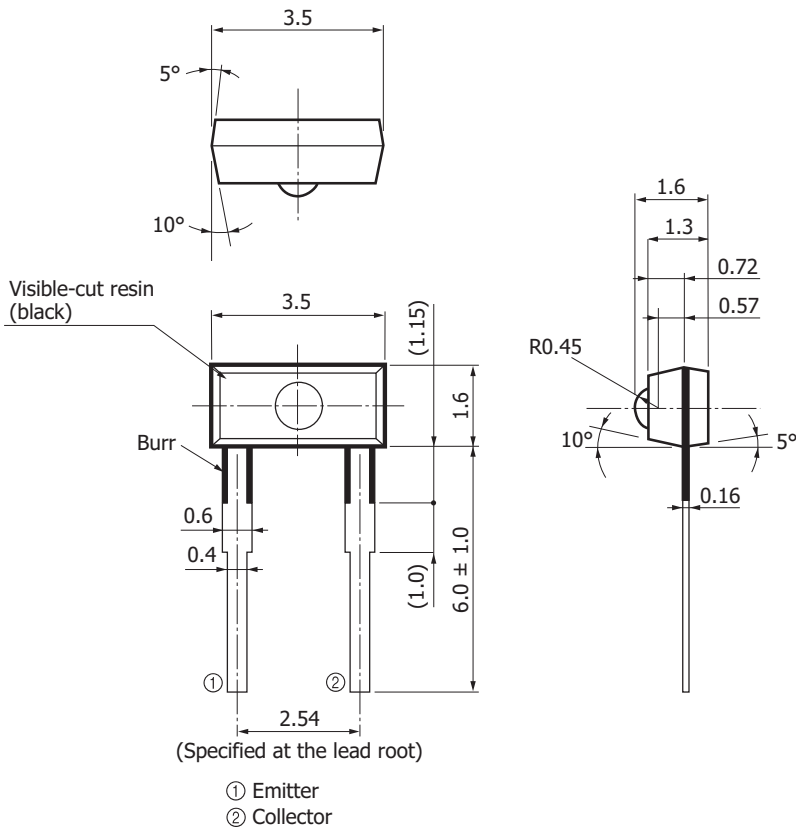
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Directivity



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Dimensional outline (unit: mm)



Tolerance unless otherwise noted: $\pm 0.2, \pm 2^\circ$
 Shaded area indicates burr.
 Values in parentheses are not guaranteed, but for reference.

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Related information

www.hamamatsu.com/sp/ssd/doc_en.html

■ Precautions

- Disclaimer
- Metal, ceramic, plastic products

Information described in this material is current as of June, 2015.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

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