

Silicon Photo Transistor

KS853

Description

Model **KS853** is NPN type of silicon photo transistor in TO-18 type header with epoxy encapsulation.

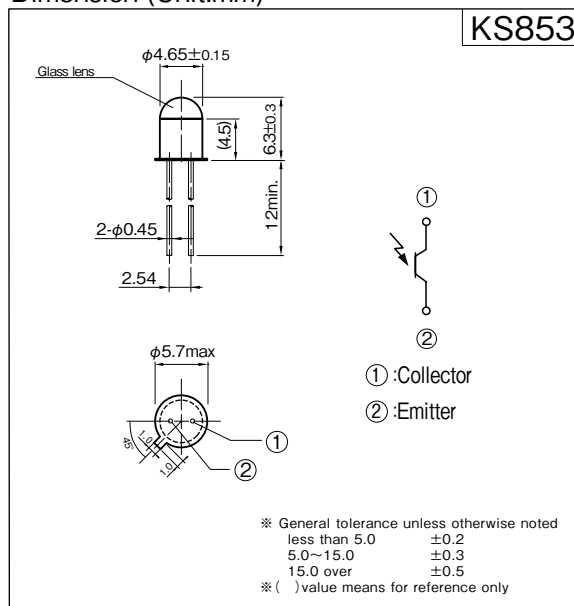
Feature

- NPN photo transistor. (λ p:900nm)
- TO-18 package.

Application

- Photo acceptance unit for Photo sensor.
- Optical Switch.

Dimension (Unit:mm)



Absolute Maximum Ratings

[Ta=25°C Unless otherwise noted]

Item	Symbol	Rating	Units
Collector-Emitter Voltage	V_{CE0}	30	V
Emitter-Collector Voltage	V_{EC0}	5	V
Collector Current	I_C	20	mA
Collector Power Dissipation	P_C	100	mW
Operating Temperature	T_{opr}	-25 ~ +125	°C
Storage Temperature	T_{stg}	-55 ~ +150	°C
Soldering Temperature ※ 1	T_{sol}	260	°C

※ 1. Soldering condition 5sec. At 2.6 mm over from TO-18 header.

※ 2. Ev : CIE STD. A Light source

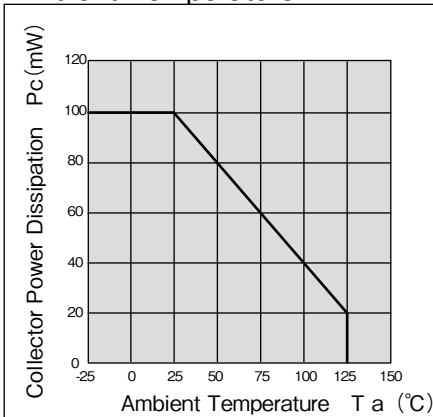
Electro-Optical Characteristics [Ta=25°C Unless otherwise noted]

Item	Symbol	Condition	min.	typ.	max.	Units
Light Current	I_C	$V_{CE}=5V, E_v=100 \text{ lux}$ ※ 2	0.55	4	—	mA
Dark Current	I_{CE0}	$V_{CE}=10V, E_v=0 \text{ lux}$ ※ 2	—	—	200	nA
Collector-Emitter Voltage	$V_{CE(sat)}$	$I_C=1mA, E_v=1000 \text{ lux}$ ※ 2	—	0.25	0.5	V
Peak Wavelength	λ_p		—	900	—	nm
Half Angle	$\Delta\theta$		—	± 8	—	deg
Response Time	Rise	$V_{CC}=5V, I_C=2mA, R_L=100 \Omega$	—	2	—	$\mu \text{ sec}$
	Fall		—	3	—	

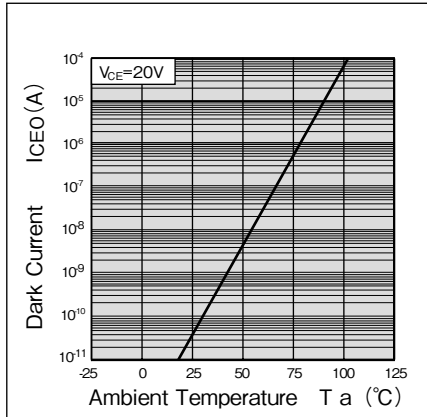
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Note: Operation never exceeds each value of Absolute Maximum Ratings.

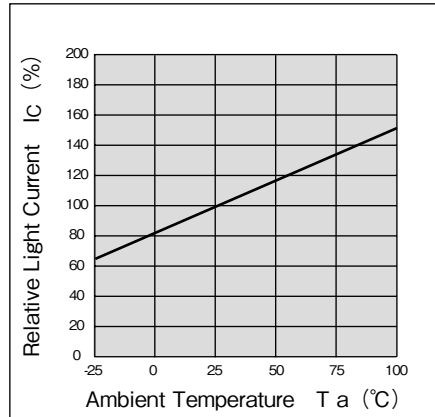
Collector Power Dissipation vs. Ambient Temperature



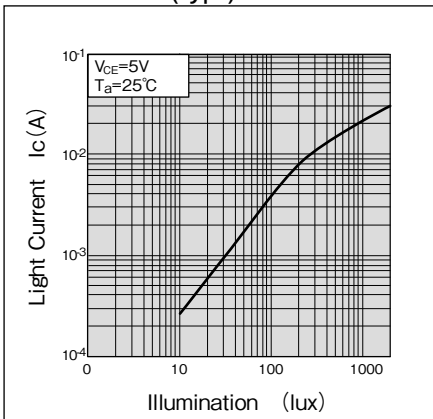
Dark Current vs. Ambient Temperature (typ.)



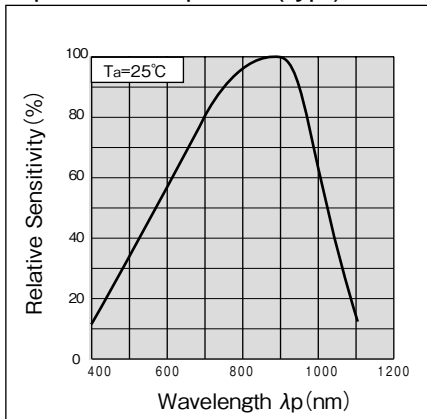
Relative Light Current vs. Ambient Temperature (typ.)



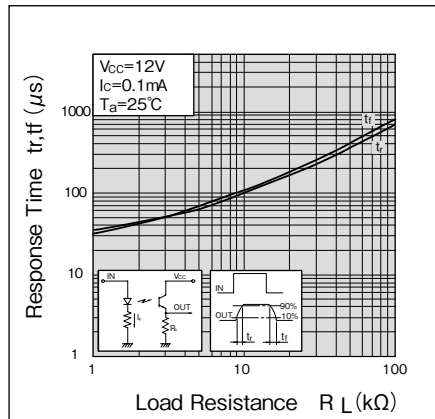
Light Current vs. Illumination (typ.)



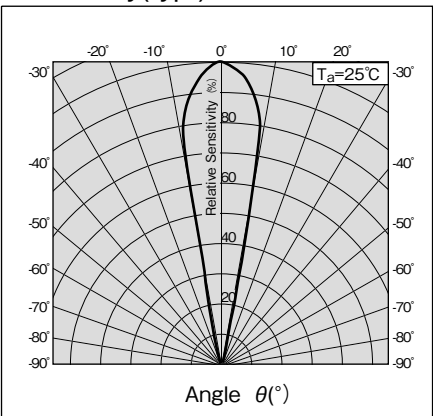
Spectral Response (typ.)



Response Time vs. Load Resistance (typ.)



Directivity (typ.)



- A Custom designed package is available on request.
- Specification are subject to change without notice.

05.10.-1A

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