

Photo diodes

KODENSHI

SP - 45ML

The SP - 45ML, a silicon photodiode mounted in a TO - 5 type header with clear epoxy encapsulation, provides wide angular response and high - output power.

FEATURES

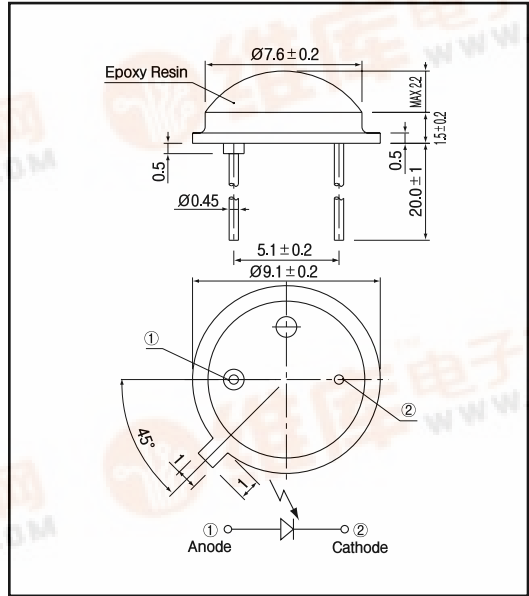
- High - output power
- Relatively low - cost against metal can package
- Wide angular response

APPLICATIONS

- Optical detectors
- Infrared sensors
- Smoke detectors

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25 )

Item	Symbol	Rating	Unit
Reverse voltage	V <sub>R</sub>	5	V
Operating temp.	T <sub>opr.</sub>	- 20 ~ +90	
Storage temp.	T <sub>stg.</sub>	- 30 ~ +100	
Soldering temp. *1	T <sub>sol.</sub>	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25 )

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Open circuit voltage	V <sub>oc</sub>	E <sub>v</sub> = 1,000lx <sup>-2</sup>		0.4		V
Short circuit current	I <sub>sc</sub>		81	170		μA
Dark current	I <sub>d</sub>	V <sub>R</sub> = 5V			10	μA
Curve factor	C.F.		0.55			-
Capacitance	C <sub>t</sub>	V = 0V, f = 1MHz		1,050		pF
Temperature coefficient of V <sub>oc</sub>	t			- 2.2		mV/
Temperature coefficient of I <sub>sc</sub>	t			0.18		%/
Spectral sensitivity				450 ~ 1,050		nm
Peak wavelength	p			900		nm
Half angle				±60		deg.

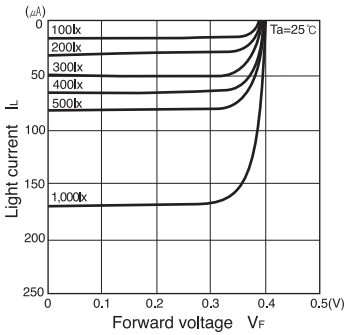
\*2. Color temp. = 2856K standard Tungsten lamp



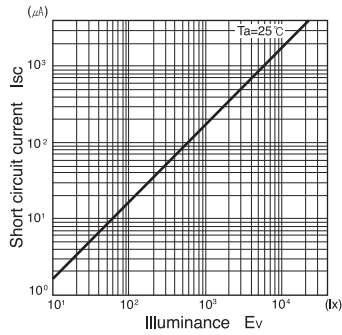
**Photo diodes**

**SP - 45ML**

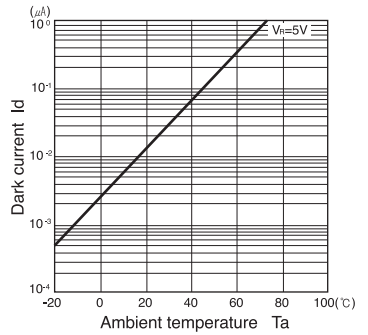
**Light current Vs. Forward voltage**



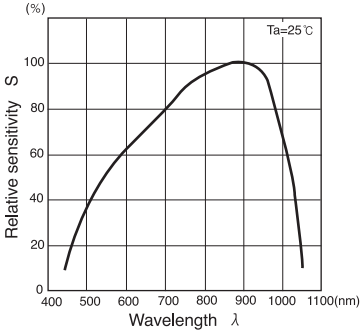
**Short circuit current Vs. Illuminance**



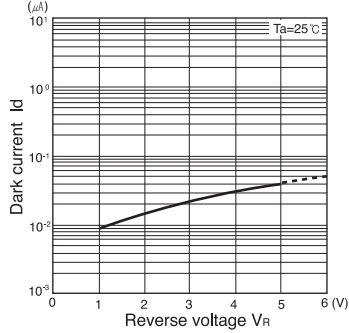
**Dark current Vs. Ambient temperature**



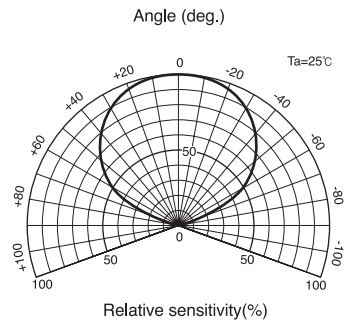
**Relative sensitivity Vs. Wavelength**



**Dark current Vs. Reverse voltage**



**Radiant Pattern**



**Capacitance between terminals Vs. Reverse voltage**

