

SP - 1 ML

The SP - 1ML, a silicon photodiode mounted in a TO - 18 type header with clear epoxy encapsulation, provides wide angular response and is relatively low - cost as compared to TO - 18 can - type devices.

FEATURES

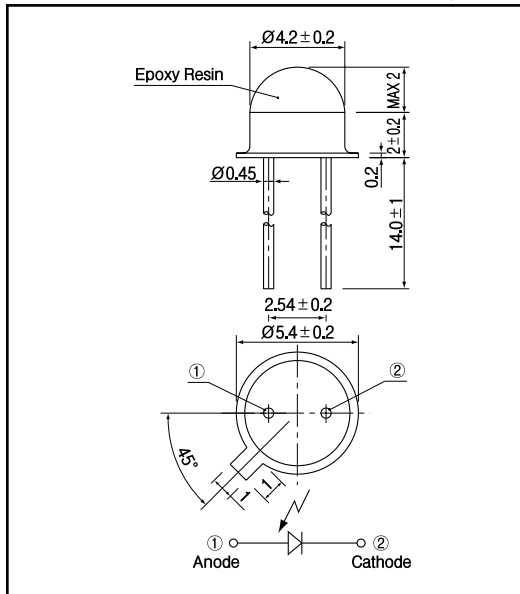
- Wide angular response
- Low profile package
- Relatively low - cost against metal can package

APPLICATIONS

- Optical detectors
- Infrared sensors
- Smoke detectors

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	20	V
Operating temp.	Topr.	- 25 ~ +90	
Storage temp.	Tstg.	- 30 ~ +100	
Soldering temp. **	Tsol.	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

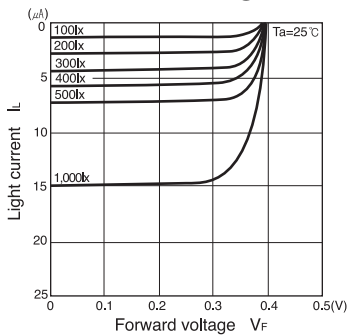
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Open circuit voltage	V_{oc}	$E_v = 1,000lx^{-2}$		0.4		V
Short circuit current	I_{sc}		8	15		μA
Dark current	I_d	$V_R = 5V$			0.1	μA
Curve factor	C.F.		0.55			-
Capacitance	Ct	$V = 0V, f = 1MHz$		50		pF
Temperature coefficient of V_{oc}	t			- 2.2		mV/
Temperature coefficient of I_{sc}	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

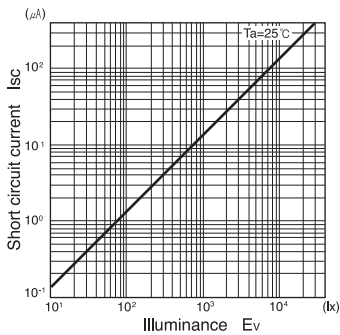
Photo diodes

SP - 1 ML

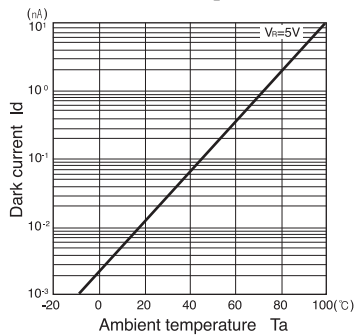
Light current Vs. Forward voltage



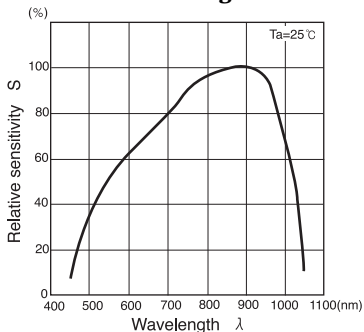
Short circuit current I_sc Vs. Illuminance E_v



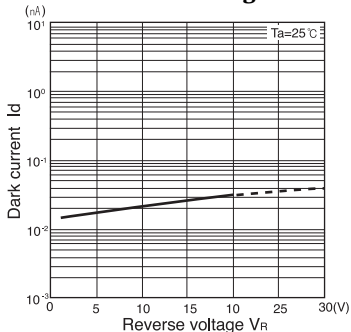
Dark current I_d Vs. Ambient temperature T_a



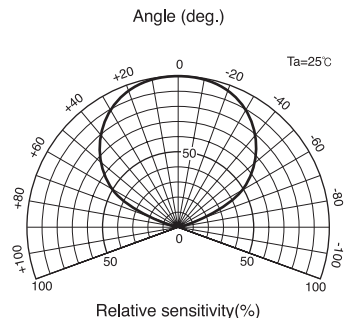
Relative sensitivity S Vs. Wavelength λ



Dark current I_d Vs. Reverse voltage V_R



Radiant Pattern



Capacitance between terminals C_t Vs. Reverse voltage V_R

