

SP - 1ML

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

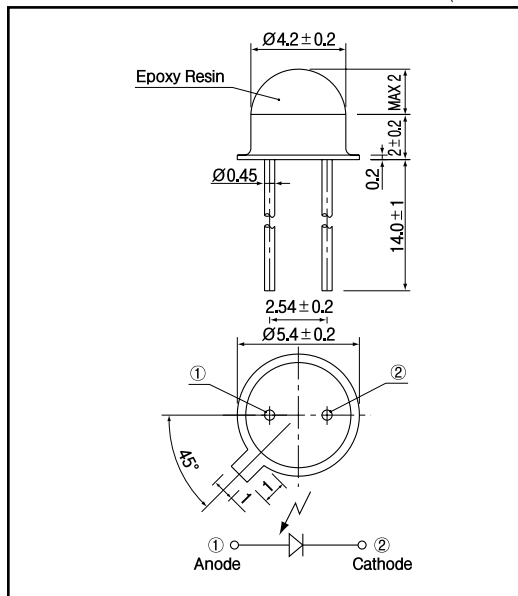
- Wide angular response
- Low profile package
- Relatively low - cost against metal can package

APPLICATIONS

- Optical detectors
- Infrared sensors
- Smoke detectors

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	20	V
Operating temp.	$T_{opr.}$	- 25 ~ +90	°C
Storage temp.	$T_{stg.}$	- 30 ~ +100	°C
Soldering temp. ¹⁾	$T_{sol.}$	260	°C

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

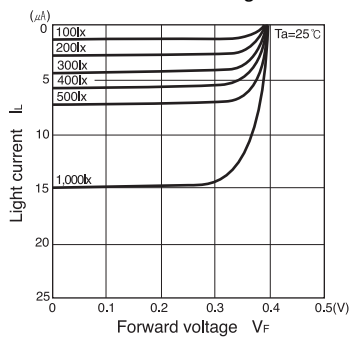
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Open circuit voltage	V_{oc}	$E_v = 1,000lx$ ²⁾		0.4		V
Short circuit current	I_{sc}		8	15		μA
Dark current	I_d	$V_R = 5V$			0.1	μA
Curve factor	C.F.		0.55			-
Capacitance	C_t	$V = 0V, f = 1MHz$		50		pF
Temperature coefficient of V_{oc}	α_t			- 2.2		mV/°C
Temperature coefficient of I_{sc}	β_t			0.18		%/°C
Spectral sensitivity	λ			450 ~ 1,050		nm
Peak wavelength	λ_p			900		nm
Half angle	$\Delta \theta$			±60		deg.

²⁾ Color temp. = 2856K standard Tungsten lamp

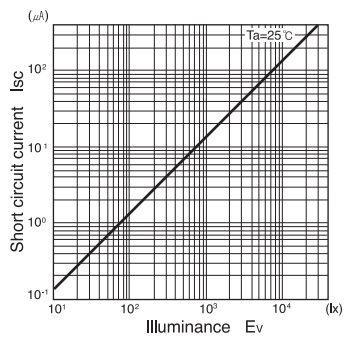
Photo diodes

SP - 1ML

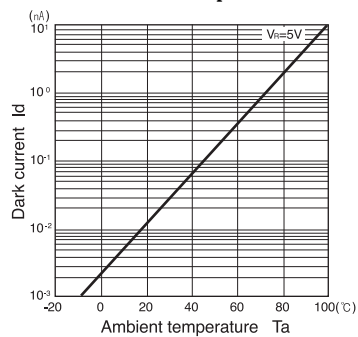
**Light current Vs.
Forward voltage**



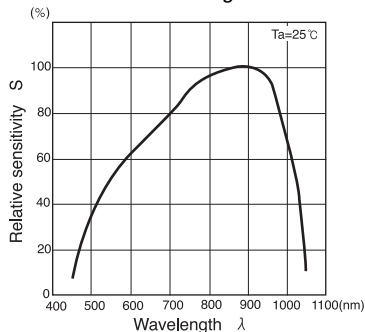
**Short circuit current Vs.
Illuminance**



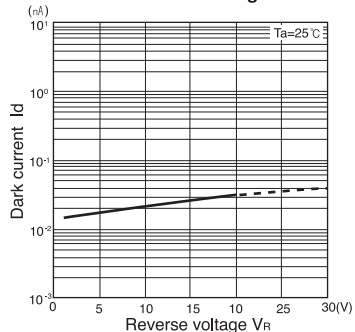
**Dark current Vs.
Ambient temperature**



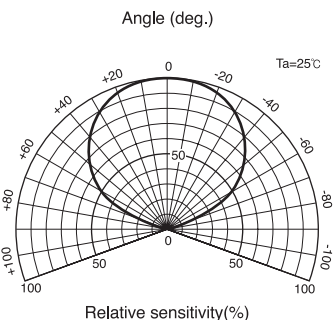
**Relative sensitivity Vs.
Wavelength**



**Dark current Vs.
Reverse voltage**



Radiant Pattern



**Capacitance between terminals Vs.
Reverse voltage**

