

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

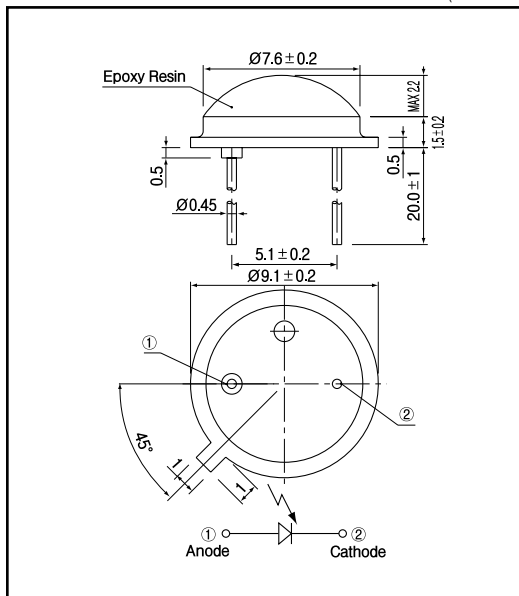
- High - output power
- Relatively low - cost against metal can package
- Wide angular response

APPLICATIONS

- Optical detectors
- Infrared sensors
- Smoke detectors

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	5	V
Operating temp.	$T_{opr.}$	- 20 ~ +90	
Storage temp.	$T_{stg.}$	- 30 ~ +100	
Soldering temp. ^{*)}	$T_{sol.}$	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

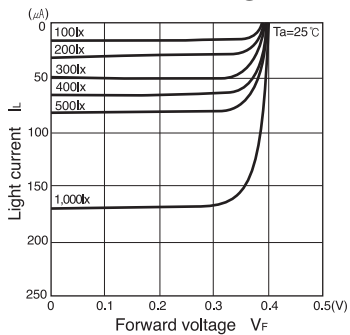
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Open circuit voltage	V_{oc}	$E_V = 1,000lx^{-2}$		0.4		V
Short circuit current	I_{sc}		81	170		μA
Dark current	I_d	$V_R = 5V$			10	μA
Curve factor	C.F.		0.55			-
Capacitance	C_t	$V = 0V, f = 1MHz$		1,050		pF
Temperature coefficient of V_{oc}	t			- 2.2		mV/
Temperature coefficient of I_{sc}	t			0.18		%/
Spectral sensitivity				450 ~ 1,050		nm
Peak wavelength	λ_p			900		nm
Half angle				± 60		deg.

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

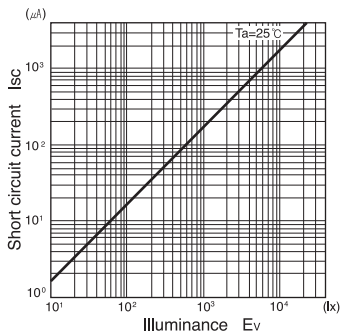
Photo diodes

SP - 45ML

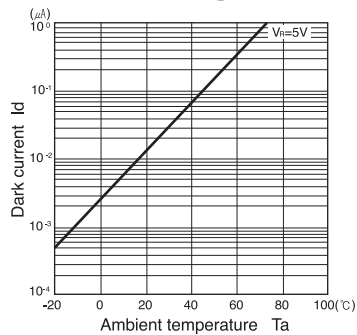
Light current Vs. Forward voltage



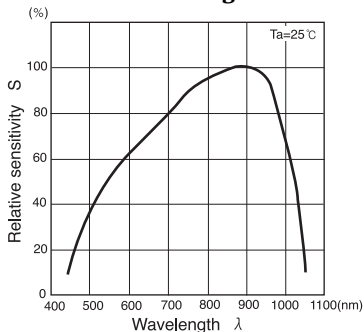
Short circuit current I_sc Vs. Illuminance E_v



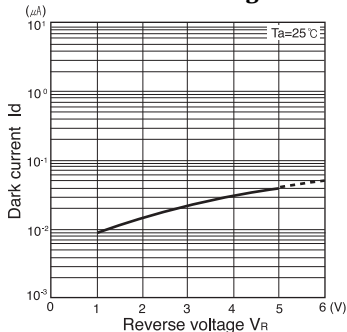
Dark current I_d Vs. Ambient temperature T_a



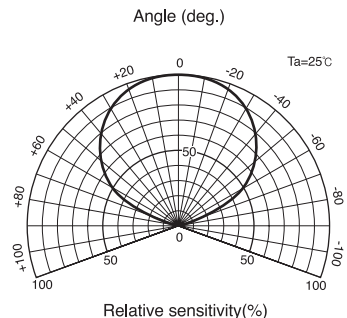
Relative sensitivity S Vs. Wavelength λ



Dark current I_d Vs. Reverse voltage V_R



Radiant Pattern



Capacitance between terminals C_t Vs. Reverse voltage V_R

