

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

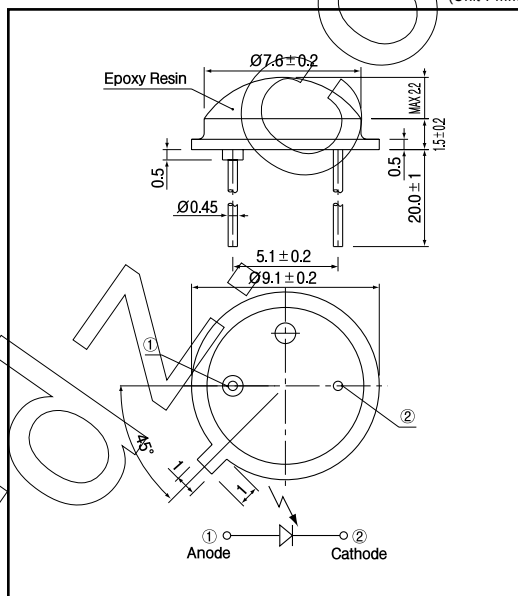
- High - output power
- Relatively low - cost against metal can package
- Wide angular response

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.	Topr.	-20 ~ +90	
Storage temp.	Tstg.	-30 ~ +100	
Soldering temp. *1	Tsol.	260	

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

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

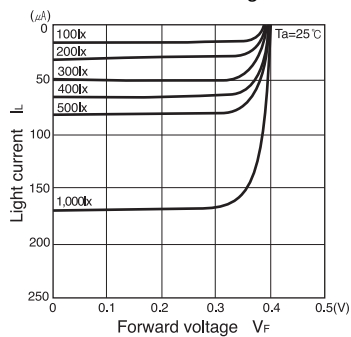
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Open circuit voltage	V_{oc}	$E_v = 1,000 \text{ lx}^{-2}$		0.4		V
Short circuit current	I_{sc}		81	170		μA
Dark current	I_d	$V_R = 5\text{V}$			10	μA
Curve factor	C.F.		0.55			-
Capacitance	C_t	$V = 0\text{V}, f = 1\text{MHz}$		1,050		pF
Temperature coefficient of V_{oc}	α_t			-2.2		mV/
Temperature coefficient of I_{sc}	β_t			0.18		%/
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

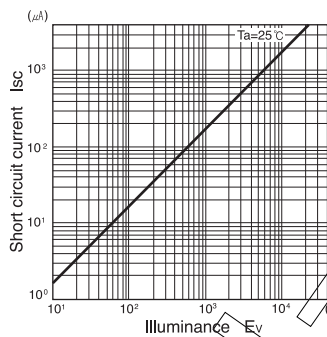
Photo diodes

SP - 45ML

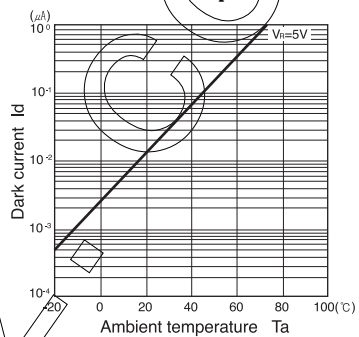
Light current Vs. Forward voltage



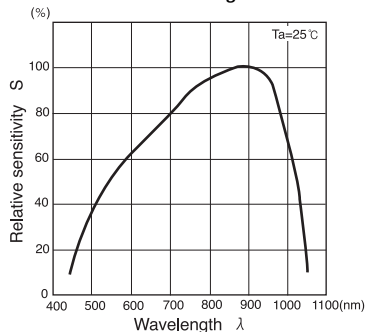
Short circuit current Vs. Illuminance



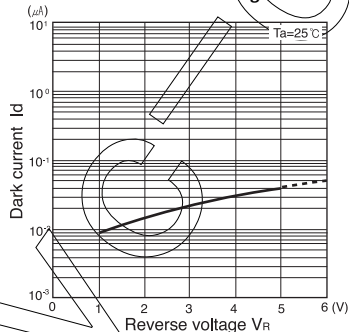
Dark current Vs. Ambient temperature



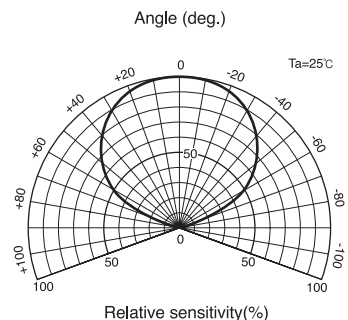
Relative sensitivity Vs. Wavelength



Dark current Vs. Reverse voltage



Radiant Pattern



Capacitance between terminals Vs. Reverse voltage

