SP - 1CL3 · SP - 1CL3R2

The SP - 1CL3 is a high - sensitivity photodiode mounted in a 3ø low - cost ceramic package. The SP - 1CL3R2 photodiode, with daylight filter, is available in the same package.

FEATURES

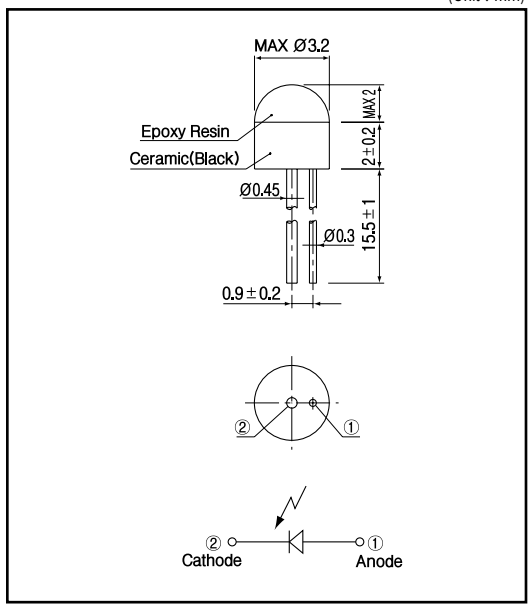
- Compact (ø3mm)
- Wide angular response
- Low - cost

APPLICATIONS

- Optical counters
- Floppy disc drives
- Encoders

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. *1	Tsol.	260	℃

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

ELECTRO-OPTICAL CHARACTERISTICS

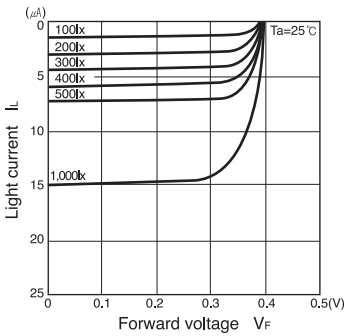
(Ta=25℃)

Item	Symbol	Conditions	SP - 1CL3			SP - 1CL3R2			Unit.
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Open circuit voltage	V_{oc}	E_v=1,000lx *2		0.4			0.4		V
Short circuit current	I_{sc}		8	15		5	15		μA
Dark current	Id	SP - 1CL3 SP - CL3R2 V_R=5V V_R=1V			0.5			1	μA
Curve factor	C.F.		0.55			0.55			-
Capacitance	Ct	V=0V, f=1MHz		50			50		pF
Temperature coefficient of V_{oc}	αt			- 2.2			- 2.2		mV/℃
Temperature coefficient of I_{sc}	βt			0.18			0.18		%/℃
Spectral sensitivity	λ		450~1,050			700~1,050			nm
Peak wavelength	λp			900			920		nm
Half angle	Δθ			±50			±50		deg.

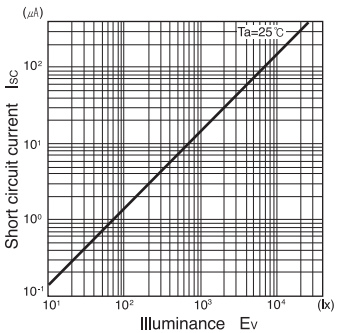
*2. Color temp.=2856K standard Tungsten lamp

SP-1CL3・SP-1CL3R2

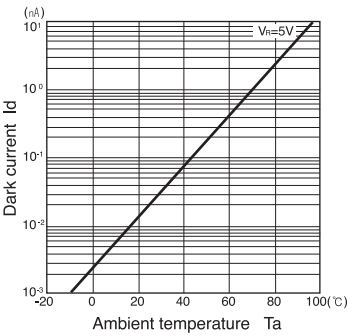
Light current Vs. Forward voltage



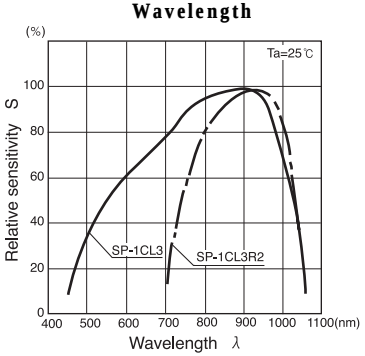
Short circuit current Vs. Illuminance



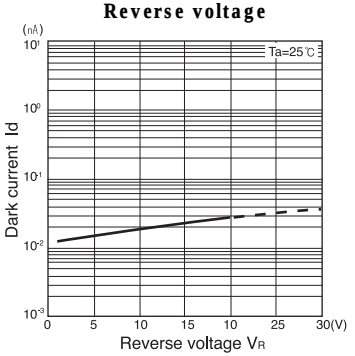
Dark current Vs. Ambient temperature



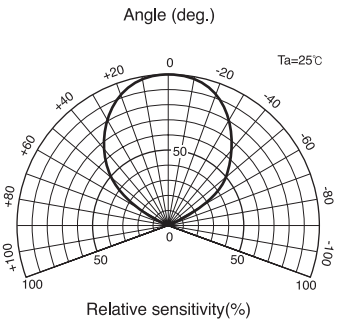
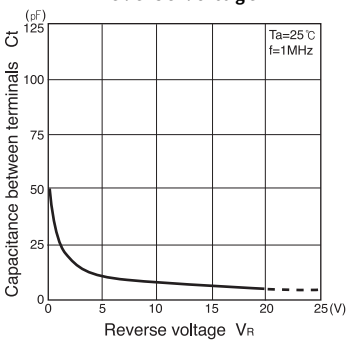
Relative sensitivity Vs. Wavelength



Dark current Vs. Reverse voltage



Radiant Pattern



Capacitance between terminals Vs. Reverse voltage