

Photo diodes

KODENSHI

SP - 1CL3 · SP - 1CL3R2

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

FEATURES

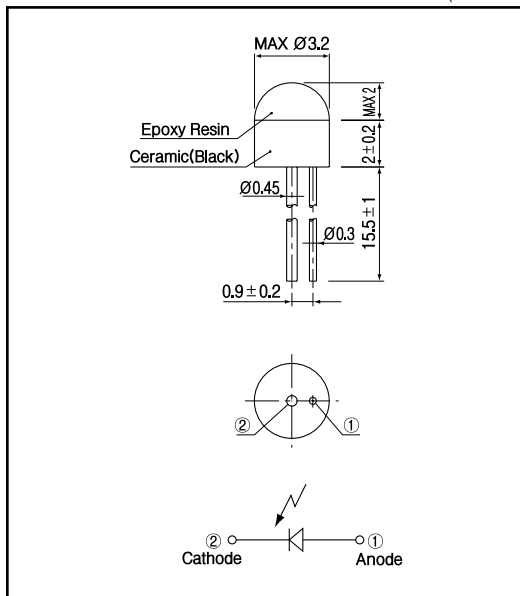
- Compact (ϕ 3mm)
- Wide angular response
- Low - cost

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)

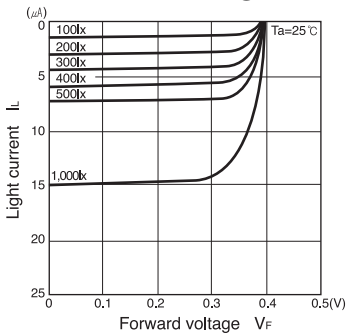
Item	Symbol	Conditions	SP - 1CL3			SP - 1CL3R2			Unit.
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Open circuit voltage	V_{oc}	$E_V = 1,000lx$ *2		0.4			0.4		V
Short circuit current	I_{sc}		8	15		5	15		μA
Dark current	I_d	$V_R = 5V, V_{oc} = 1V$			0.5			1	μA
Curve factor	C.F.		0.55			0.55			-
Capacitance	C_t	$V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

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

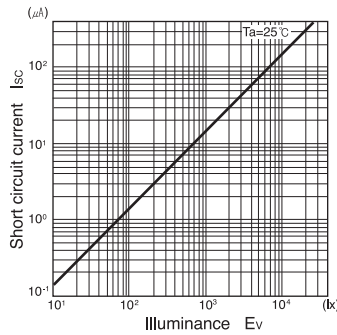
Photo diodes

SP-1CL3 · SP-1CL3R2

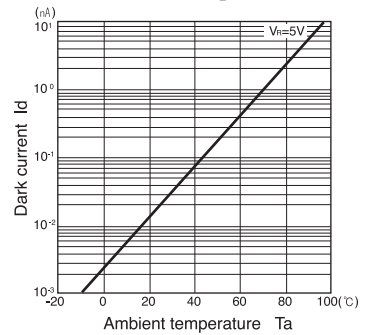
Light current Vs. Forward voltage



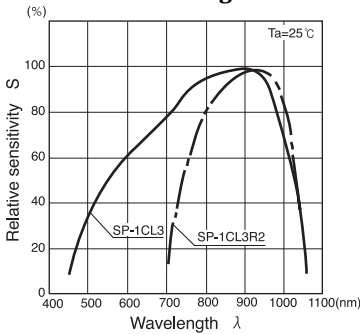
Short circuit current Vs. Illuminance



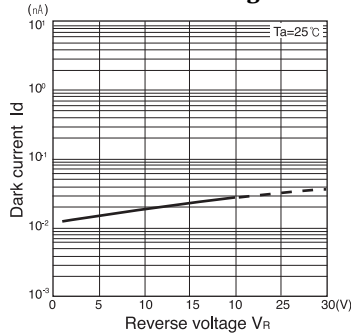
Dark current Vs. Ambient temperature



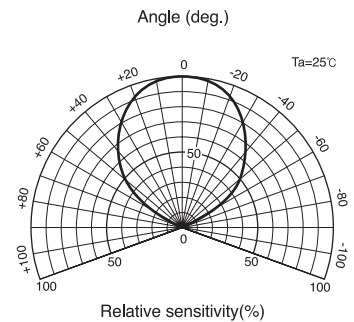
Relative sensitivity Vs. Wavelength



Dark current Vs. Reverse voltage



Radiant Pattern



Capacitance between terminals Vs. Reverse voltage

