

Photo diodes

KODENSHI

SP - 101

The SP - 101, a high - sensitivity photodiode mounted in a 3 $\emptyset$ low - cost ceramic package, is compact and permits wide angular response.

FEATURES

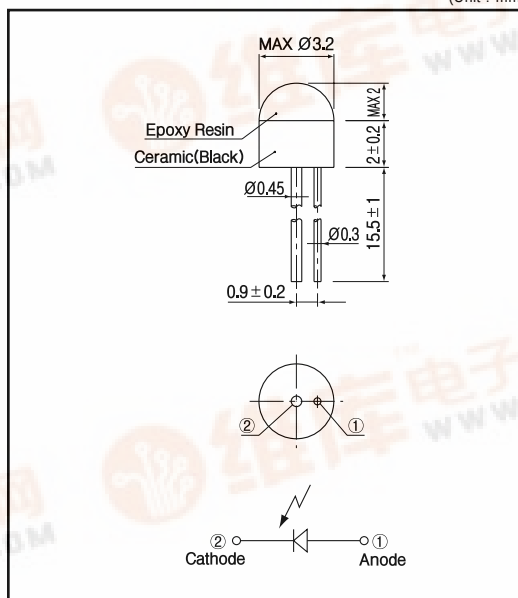
- Compact ($\emptyset 3\text{mm}$)
- Wide angular response
- Low - cost

APPLICATIONS

- Optical counters
- Encoders
- Camera stroboscopes

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit
Reverse voltage	V_R	20	V
Operating temp.	$T_{opr.}$	- 25 ~ + 90	
Storage temp.	$T_{stg.}$	- 30 ~ + 100	
Soldering temp. *1	$T_{sol.}$	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}	$E_v = 1,000 \text{ lx}^{-2}$ $V_R = 5 \text{ V}$		0.4		V
Short circuit current	I_{sc}		1.0	1.8		μA
Dark current	I_d				0.5	μA
Curve factor	C.F.		0.55			-
Capacitance	C_t	$V = 0 \text{ V}, f = 1 \text{ MHz}$		17		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			880		nm
Half angle	$\Delta \theta$			± 50		deg.

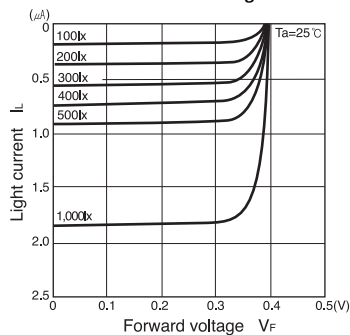
*2. Color temp. = 2856K standard Tungsten lamp



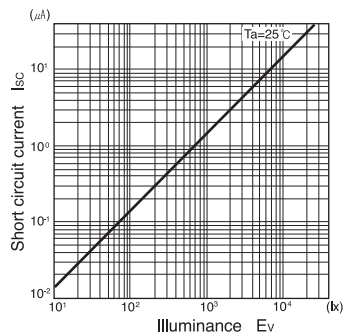
Photo diodes

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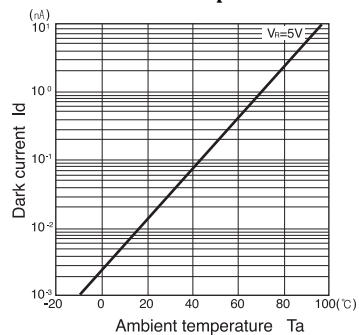
**Light current Vs.
Forward voltage**



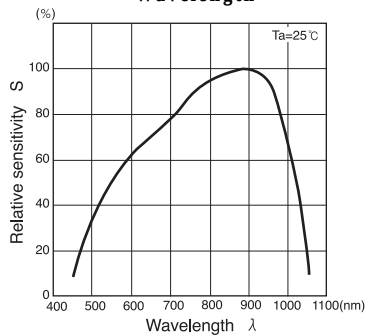
**Short circuit current Vs.
Illuminance**



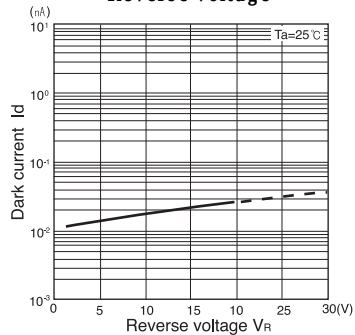
**Dark current Vs.
Ambient temperature**



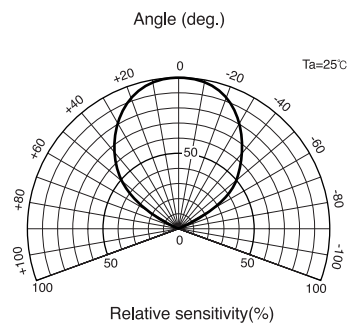
**Relative sensitivity Vs.
Wavelength**



**Dark current Vs.
Reverse voltage**



Radiant Pattern



**Capacitance between terminals Vs.
Reverse voltage**

