

SP - 1KL

The SP - 1KL, a silicon photodiode mounted in durable, hermetically sealed TO - 18metal can package, provides years of reliable performance even under demanding conditions such as use outdoors.

**FEATURES**

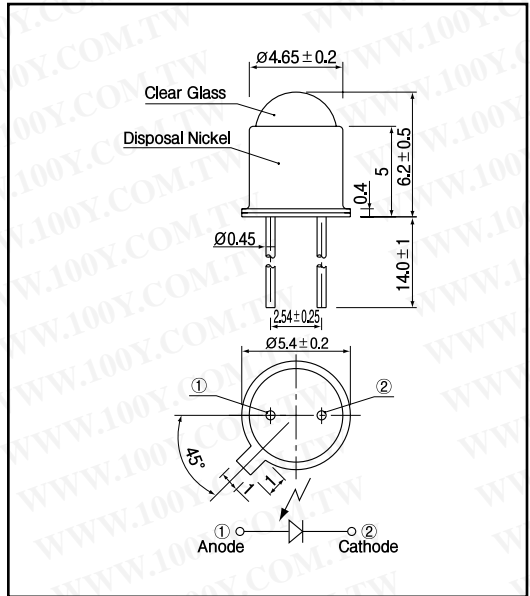
- Narrow angular response
- Durable
- High reliability in demanding environments

**APPLICATIONS**

- Optical counters
- Optical switches
- Infrared sensors
- Encoders
- Smoke detectors
- Car electronics

**DIMENSIONS**

(Unit : mm)



**MAXIMUM RATINGS**

(Ta=25 )

Item	Symbol	Rating	Unit
Reverse voltage	V <sub>r</sub>	20	V
Operating temp.	Topr.	- 25 ~ + 120	
Storage temp.	Tstg.	- 30 ~ + 150	
Soldering temp. *1	Tsol.	260	

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

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-54151736  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

**ELECTRO-OPTICAL CHARACTERISTICS**

(Ta=25 )

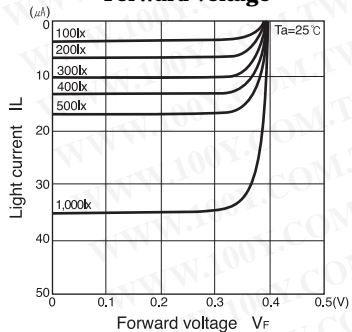
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Open circuit voltage	V <sub>oc</sub>	E <sub>v</sub> = 1,000lx <sup>-2</sup>	18	0.4		V
Short circuit current	I <sub>sc</sub>			35		μA
Dark current	I <sub>d</sub>	V <sub>r</sub> = 5V			0.1	μA
Curve factor	C.F.		0.55			-
Capacitance	C <sub>t</sub>	V = 0V, f = 1MHz		50		pF
Temperature coefficient of V <sub>oc</sub>	t			- 2.2		mV/
Temperature coefficient of I <sub>sc</sub>	t			0.18		%/
Spectral sensitivity				450 ~ 1,050		nm
Peak wavelength	λ <sub>p</sub>			900		nm
Half angle				± 15		deg.

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

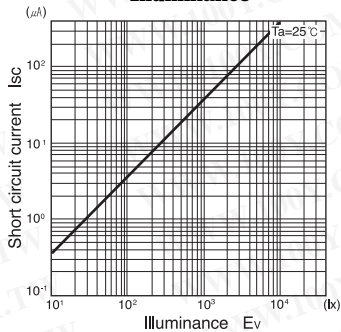
Photo diodes

SP - 1KL

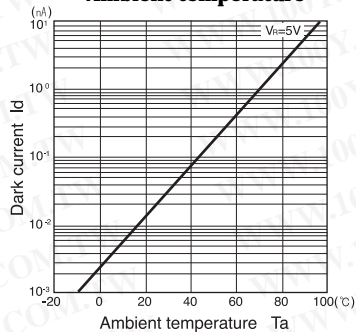
**Light current Vs. Forward voltage**



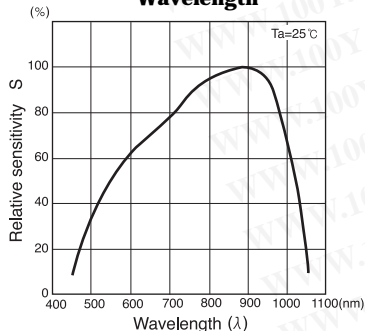
**Short circuit current Vs. Illuminance**



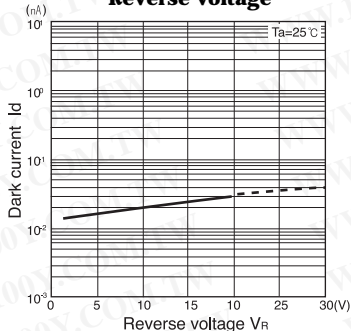
**Dark current Vs. Ambient temperature**



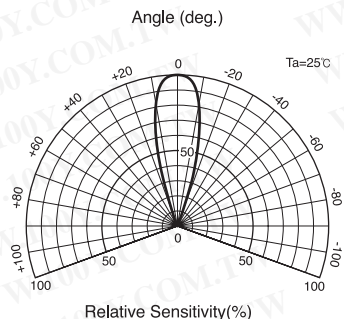
**Relative sensitivity Vs. Wavelength**



**Dark current Vs. Reverse voltage**



**Radiant Pattern**



**Capacitance between terminals Vs. Reverse voltage**

