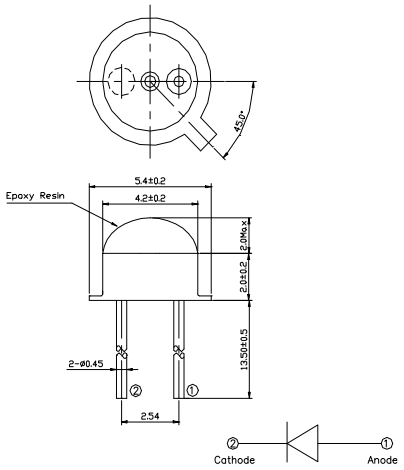
1. Scope

The KSP-1MLR2, a silicon photodiode mounted in a TO-18 type header with black epoxy encapsulation, provides wide angular response and is relatively low-cost as compared to TO-18 can-type devices.

2. Features

- ◆ Wide angular response
- ◆ Low profile package
- ◆ Relatively low-cost against metal can package



3. Applications

- ◆ Optical detectors
- ◆ Infrared sensors
- ◆ Smoke detectors

4. Package Outline

See the attached Drawing No. PD-KSP1MLR2-OT-01

5. Absolute Maximum Ratings

[Ta = 25℃]

Item	Symbol	Ratings	Unit
Reverse Voltage	V_R	20	V
Operating Temperature	Topr.	-25 ~ +90	℃
Storage Temperature	Tstg.	-30 ~ +100	℃
Soldering Temperature	Tsol.	260	℃

6. Electro-optical Characteristics

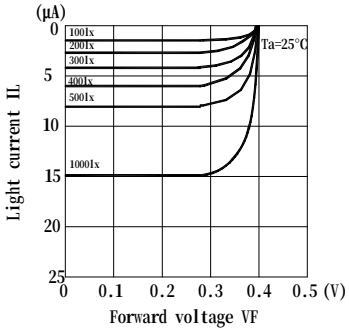
[Ta = 25℃]

Item	Simbol	Condition	Min.	Typ.	Max.	Unit
Open circuit voltage	Voc	Ev=1,000lx *1		0.4		V
Short circuit current	Isc		8	11		μA
Dark current	Id	V_R=5V			0.1	μA
Capacitance	Ct			50		pF
Temperature coefficient of Voc	αt	V=0V, f=1MHz		-2.2		V
Temperature coefficient of Isc	βt			0.18		MHz
Spectral sensitivity	λ		700~1,050			nm
Peak wavelength	λp			900		nm
Half angle	Δθ			±60		deg.

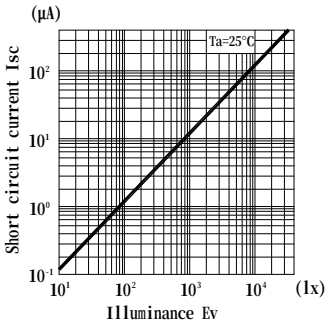
*1.Color temp.=2856K standard Tungsten lamp

7. Typical Electrical-optical Characteristics Curves

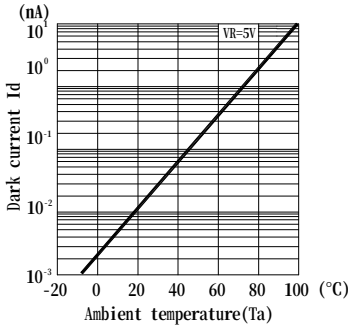
■**Light current Vs. Forward voltage**



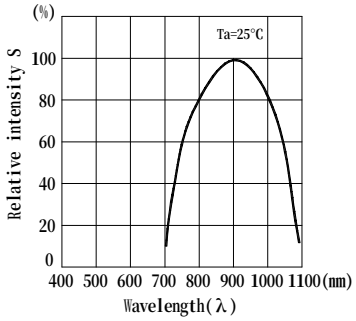
■**Short circuit current Vs. Illuminance**



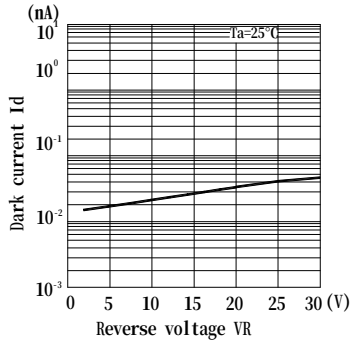
■**Dark current Vs. Ambient temperature**



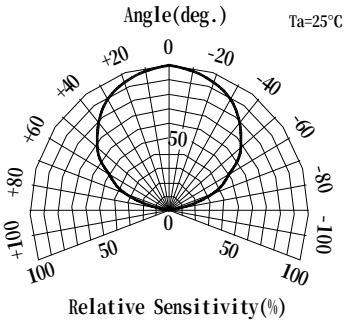
■**Relative sensitivity Vs. Wavelength**



■**Dark current Vs. Reverse voltage**



■**Radiant Pattern.**



■**Capacitance between terminal Vs. Reverse voltage**