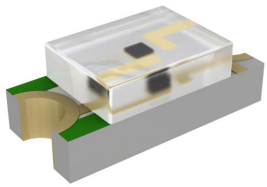
SMD INFRARED LED

KEL-0T026C

SIVAGO® SEMICONDUCTOR

Features



Small double-end package

High reliability

Low forward voltage

Good spectral matching to Si photodetector

Pb free

The product itself will remain within RoHS compliant version.

Compliance with EU REACH

Application

PCB mounted infrared sensor

Infrared emitting for miniature light barrier

Floppy disk drive

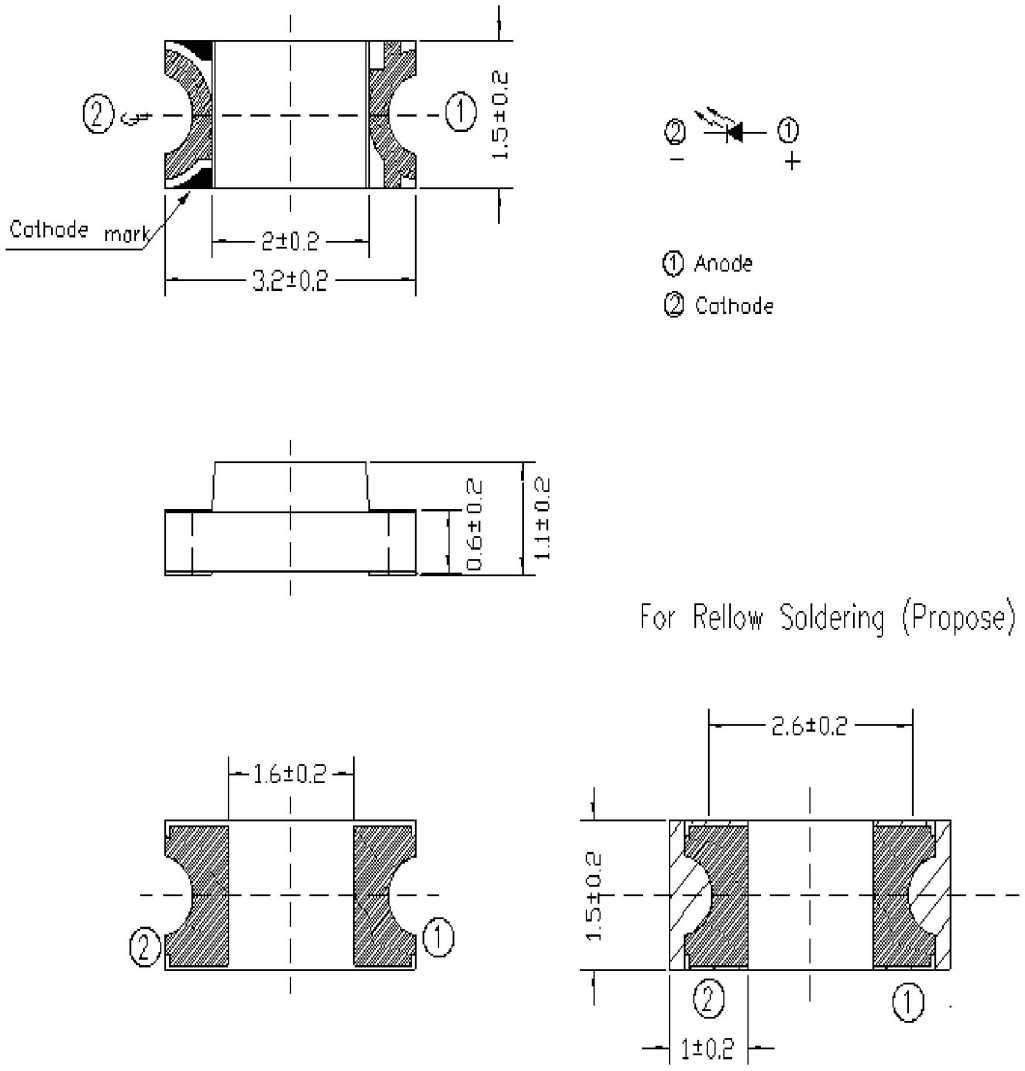
Optoelectronic switch

Smoke detector

Description

KEL-0T026C is an infrared emitting diode in miniature SMD package which is molded in a water clear plastic With flat top view lens.The device is spectrally matched with silicon photodiode and phototransistor.

PACKAGE DIMENSIONS



NOTES:

1.All dimensions are in millimeters

2.Tolerances unless dimensions ±0.1mm

3.Suggested pad dimension is just for reference only

Please modify the pad dimension based on individual need

ABSOLUTE MAXIMUM RATINGS AT TA =25℃

Parameter	Symbol	Rating	Units
Continuous Forward Current	I_F	65	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-25~ +85	℃
Storage Temperature	T_{stg}	-40 ~ +85	℃
Soldering Temperature *1	T_{sol}	260	℃
Power Dissipation at(or below) 25℃Free Air Temperature	P_d	130	mW

Notes: *1 Soldering time≦5 seconds.

ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25℃

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Radiant Intensity	I_e	I_F=20mA	0.2	0.8	--	mW/sr
Peak Wavelength	λp	I_F=20mA	--	940	--	nm
Spectral Bandwidth	Δλ	I_F=20mA	--	45	--	nm
Forward Voltage	V_F	I_F=20mA	--	1.2	1.5	V
Reverse Current	I_R	V_R=5V	--	--	10	μA
View Angle	2θ1/2	I_F=20mA	--	160	--	deg

Typical Electro-Optical Characteristics Curves

Fig.1 Forward Current vs. Ambient Temperature

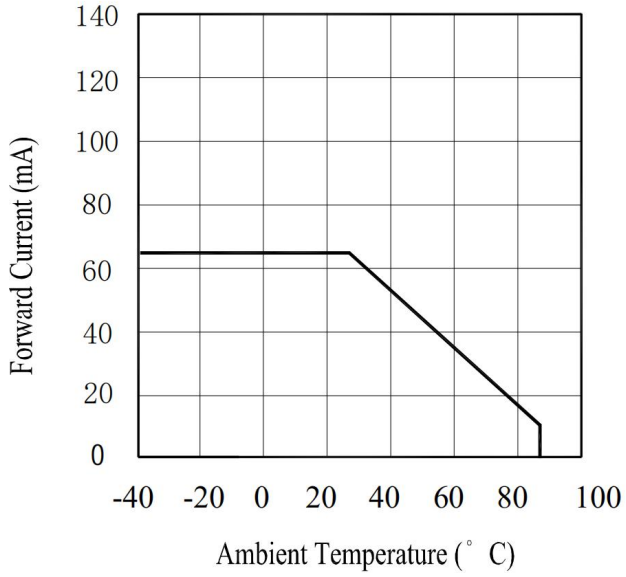


Fig.2 Spectral Distribution

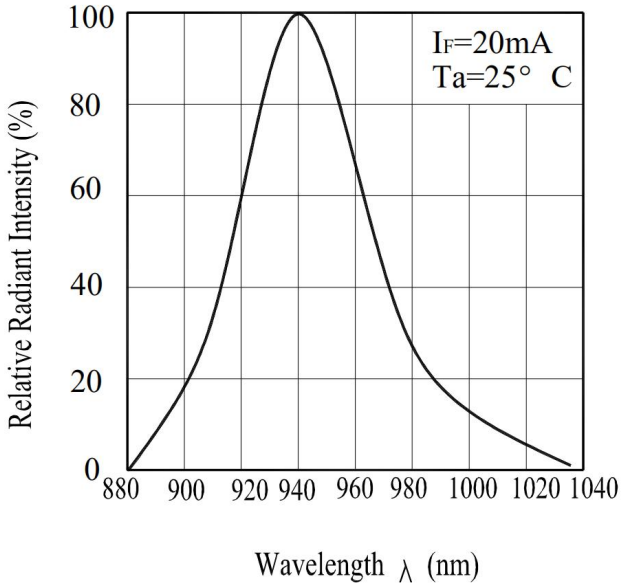


Fig.3 Forward Current vs. Forward Voltage

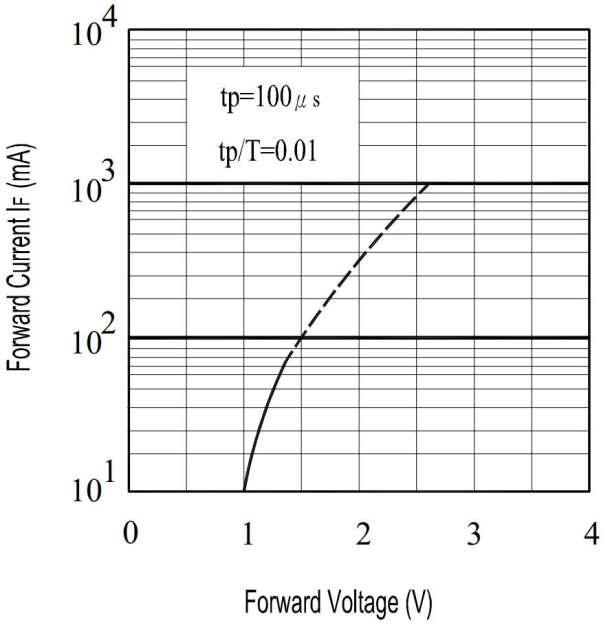
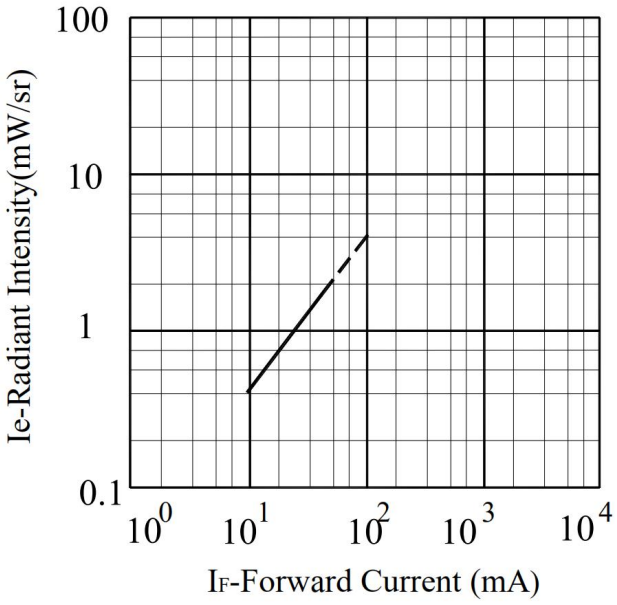
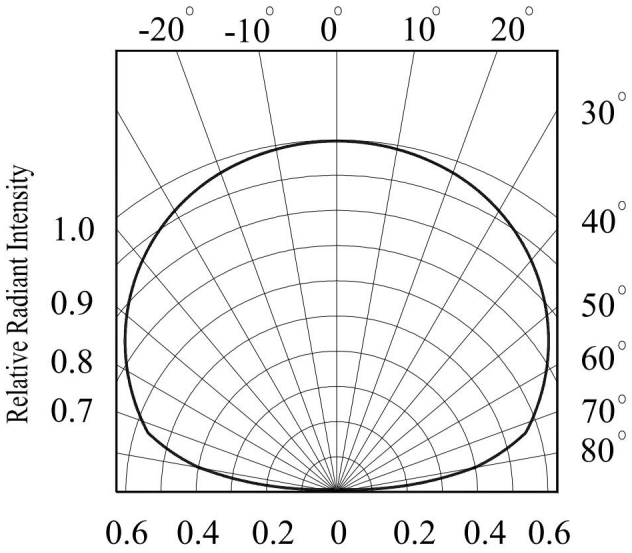


Fig.4 Relative Intensity vs. Forward Current



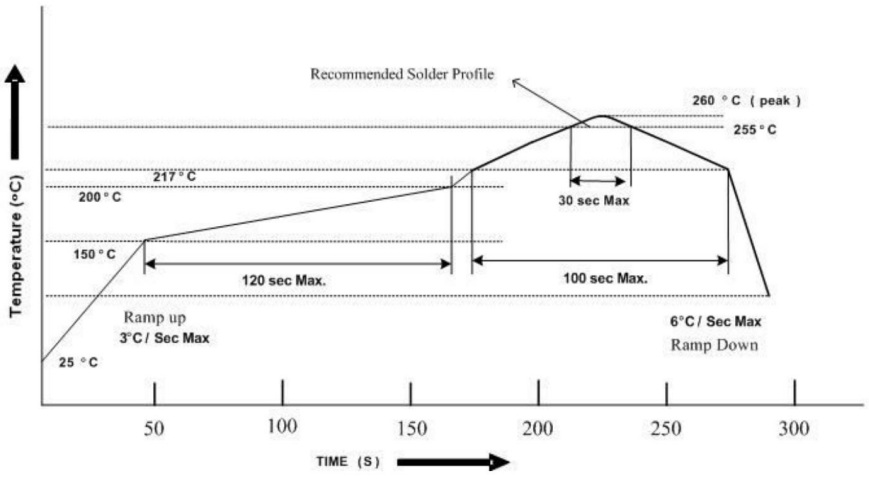
Typical Electro-Optical Characteristics Curves

Fig.5 Relative Radiant Intensity vs.
Angular Displacement



Precautions For Use

1. Over-current-proof
   Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).
2. Storage
   2.1 Do not open moisture proof bag before the products are ready to use.
   2.2 Before opening the package, the LEDs should be kept at 10℃~30℃ and 90%RH or less.
   2.3 The LEDs suggested be used within one year.
   2.4 After opening the package, the devices must be stored at 10°C~30°C and ≤ 60%RH, and used within 168 hours (floor life). If unused LEDs remain, it should be stored in moisture proof packages.
   2.5 If the moisture absorbent material (desiccant material) has faded or unopened bag has exceeded the shelf life or devices (out of bag) have exceeded the floor life, baking treatment is required.
   2.6 If baking is required, refer to IPC/JEDEC J-STD-033 for bake procedure or recommend the following conditions:
   96 hours at 60°C ± 5°C and < 5 % RH (reeled/tubed/loose units)
3. Soldering Condition
   3.1 Pb-free solder temperature profile



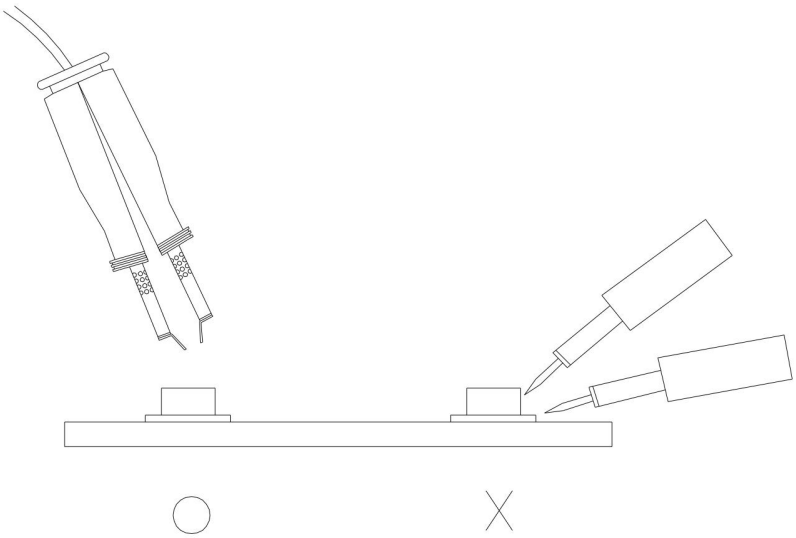
   3.2 Reflow soldering should not be done more than two times.
   3.3 When soldering, do not put stress on the LEDs during heating.
   3.4 After soldering, do not warp the circuit board.

4.Soldering Iron

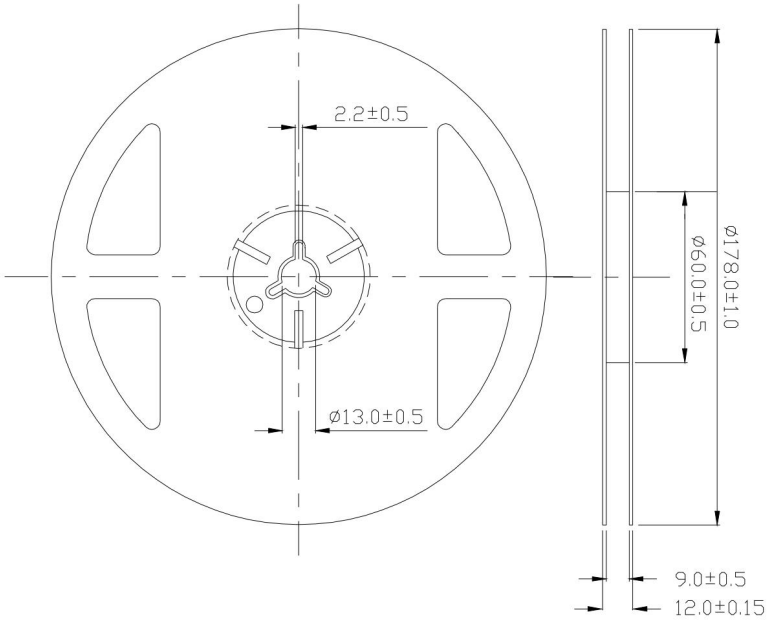
Each terminal is to go to the tip of soldering iron temperature less than 350℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5.Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

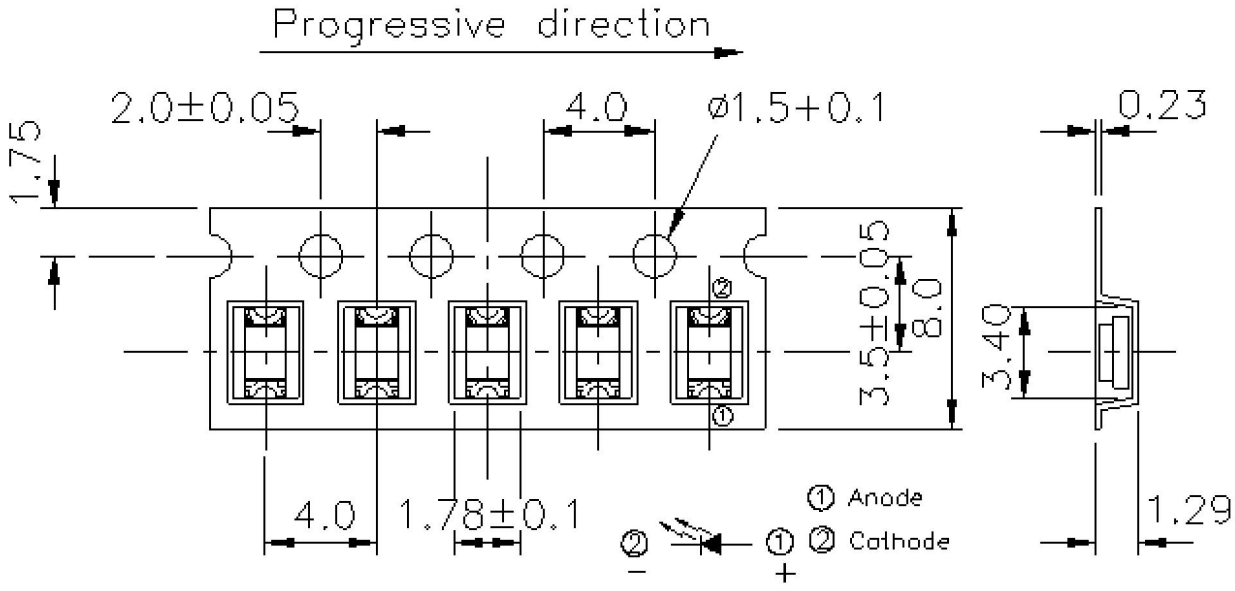


Package Dimensions



Note: The tolerances unless mentioned are ±0.1mm, Unit: mm

Carrier Taping Dimensions: (Quantity: 2000PCS/Reel)



Note: The tolerances unless mentioned are ±0.1mm, Unit: mm

Packing Quantity Specification

1. 2000Pcs/1Reel,10 Bag/1Box

2. 4Boxes/1Carton

Label Form Specification

- PRODUCT: Part Number
- CODE NO.: Product Serial Number
- QTY: Packing Quantity
- LOT No: Lot Number
- REMARKS:Remarks

Legal Disclaimer Notice

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

SIVAGO SEMICONDUCTOR CO.,LTD its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively,"SIVAGO"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

SIVAGO makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, SIVAGO disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special,consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on SIVAGO's knowledge of typical requirements that are often placed on SIVAGO products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase,including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, SIVAGO products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the SIVAGO product could result in personal injury or death.Customers using or selling SIVAGO products not expressly indicated for use in such applications do so at their own risk.Please contact authorized SIVAGO personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of SIVAGO. Product names and markings noted herein may be trademarks of their respective owners.