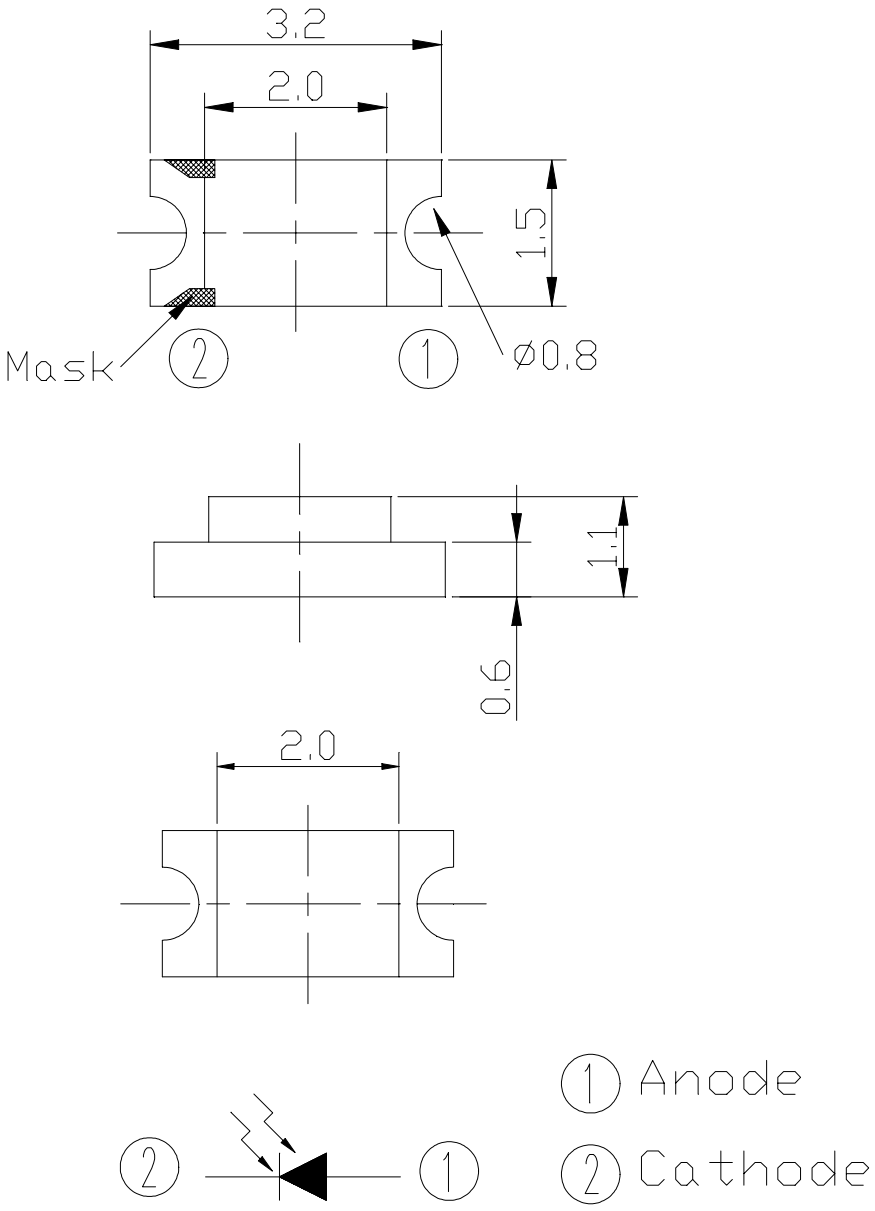
Package Dimensions:



OFFICE: NO 25,Lane 76,Chung Yang Rd, Sec.3 Tucheng, Taipei 236, Taiwan, R.O.C.
TEL : 886-2-2267-2000,2266-9936 (22 Lines)
FAX : 886-2-2267-6189
http://www.everlight.com

◎**Notes**：

1.All dimensions are in millimeter.
2.General Tolerance: ± 0.25mm
2.Lead spacing is measured where the lead emerge from the package .
4.Lens color：Water Clear.
5.Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
6.These specification sheets include materials protected under copyright of EVERLIGHT corporation . Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.
7.When using this product , please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

Description

PD15-21C is a high speed and high sensitve PIN photodiode in miniature SMD which is molder in a water clear with flat top view lens.The device is spectrally matched with the infrared emitting diode.

Features

- High photo sensitivity
- Fast response time
- Small junction capacitance

Applications

- High speed photo detector
- Optoelectronic swithces
- Game machines

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	33	V
Power Dissipation	Pd	150	mW
Lead Soldering Temperature (1/16 inch from body for 5 sec.)	Tsol	260	°C
Operating Temperature Range	Topr	-25 to+85	°C
Storage Temperature Range	Tstg	-40 to+85	°C

Electro Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Rang of Spectral Bandwidth	$\lambda_{0.5}$	400		1200	nm	----------
Wavelength of Peak Sensitivity	λ_P		980		nm	----------
Open-Circuit Voltage	Voc		0.42		V	Ee=5m W/c ㎡ λp=940nm
Short-Circuit Current	Isc		2.8		μA	
Reverse Light Current	I_L		3.0		μA	Ee=5m W/c ㎡ λp=940nm，V_R=5V
Dark Current	Id			10	nA	Ee=0m W/c ㎡ V_R=10V
Reverse Breakdown Voltage	BV_R	33	170		V	Ee=0m W/c ㎡ I_R=100μA
Terminal Capacitance	Ct		5		pF	Ee=0m W/c ㎡ V_R=5V,f=1MHz
Rise/Fall Time	t_r/t_f		6/6		nS	V_R=10V R_L=1KΩ

Typical Electrical/Optical/Characteristics Curves

Fig. 1 Power Dissipation vs. Ambient Temperature

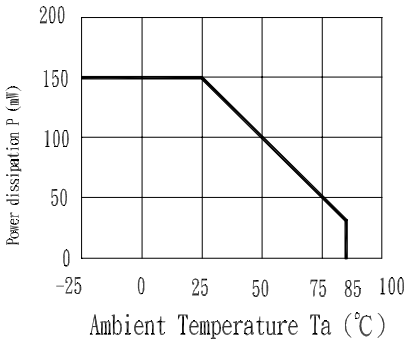


Fig. 2 Spectral Sensitivity

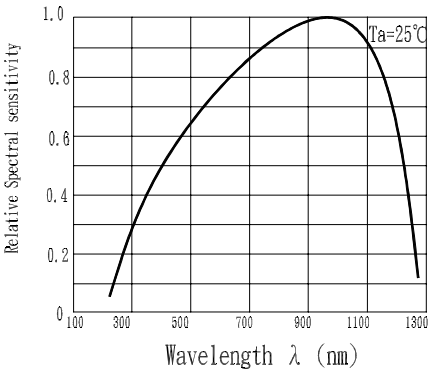


Fig. 3 Dark Current vs. Ambient Temperature

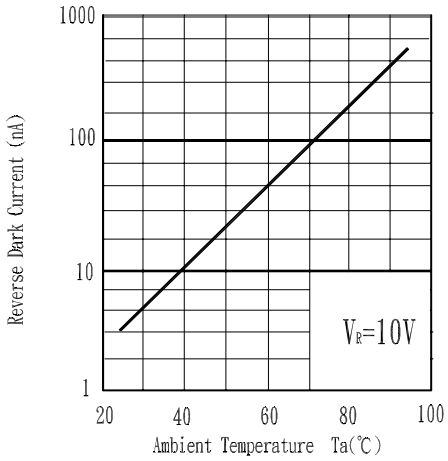


Fig. 4 Reverse Light Current vs. Ee

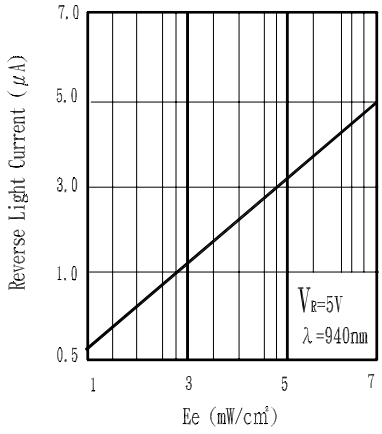


Fig. 5 Terminal Capacitance vs. Revere Voltage

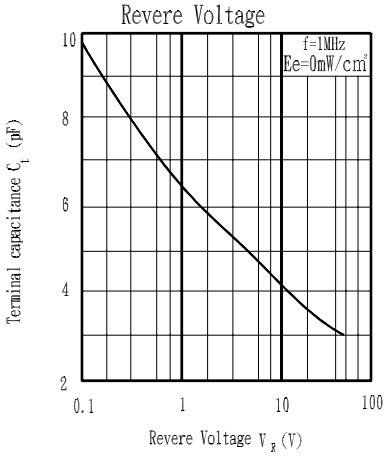
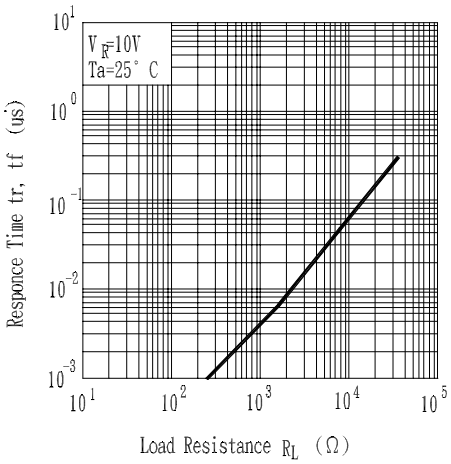


Fig. 6 Responce Time vs. Load Resistance



Reliability

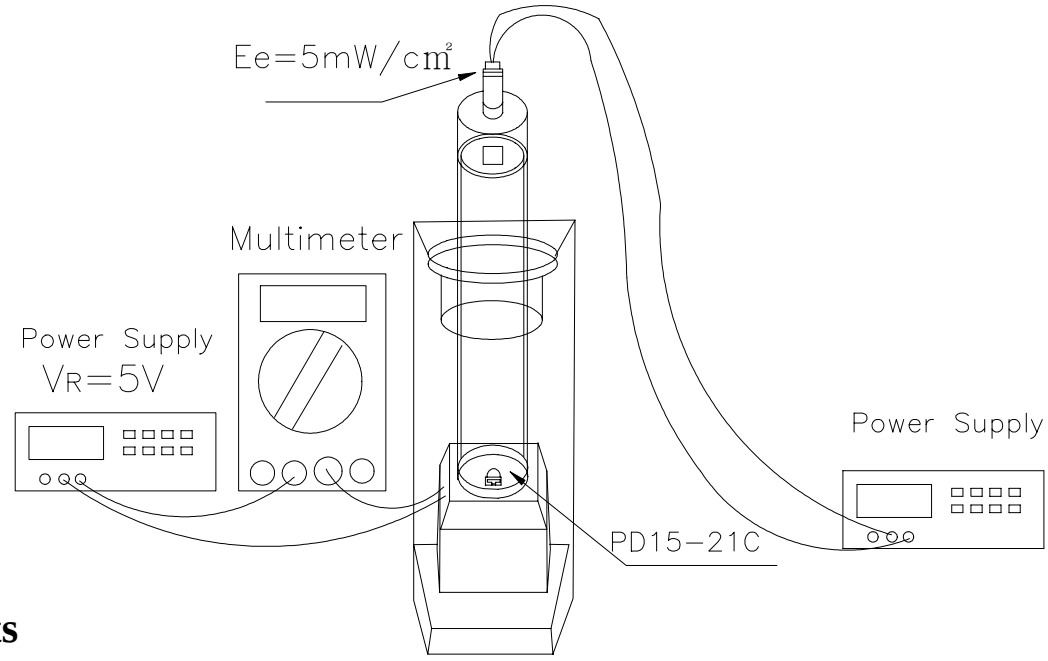
The reliability of products shall be satisfied with items listed below.
Confidence level ：90%
LTPD：10%

Test Items	Test Conditions	Failure Judgement Criteria	Samples(n) / Defective(c)
Operation life	V_R=5V，Ta：25℃ 1000hrs	$I_L \leqq L \times 0.8$ L：Lower specification limit	n =22，c=0
Temperature cycle	1cycle –55℃to+25℃to +85℃ (30min) (5min) (30min) 50 cycle test		n =22，c=0
Thermal shock	-10℃ to + 100℃ (5min) (10sec) (5min) 50cycle test		n =22，c=0
High temperature storage	Temp：+100℃ 1000hrs		n =22，c=0
Low temperature storage	Temp：-55℃ 1000hrs		n =22，c=0
High temperature High humidity	Ta：85℃ RH：85% 1000hrs		n =22，c=0
Solderability	Temp：230 ± 5℃ 5sec 2mm Form the bottom of the package.	More than 90% of Lead to be covered by soldering	n =22，c=0

Test Method For Reverse Light Current

Condition：Ee=5m W/c ㎡ , V_R=5V

Test Item：Reverse Light Current (unit： μA)



Supplements

1.Parts

(1) Chip

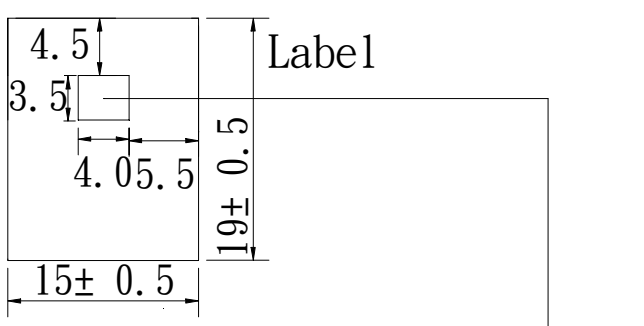
Type	Material	Wavelength of Peak Sensitivity
PD	Silicon	980nm

(2) Material

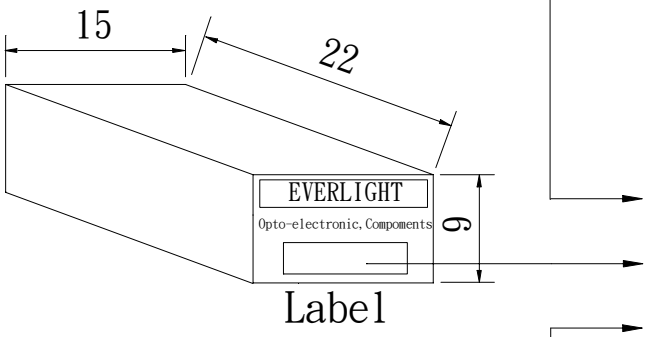
Type	Lead Frame	Wire	Package
Material	BT	Gold	Epoxy

Packing Specifications

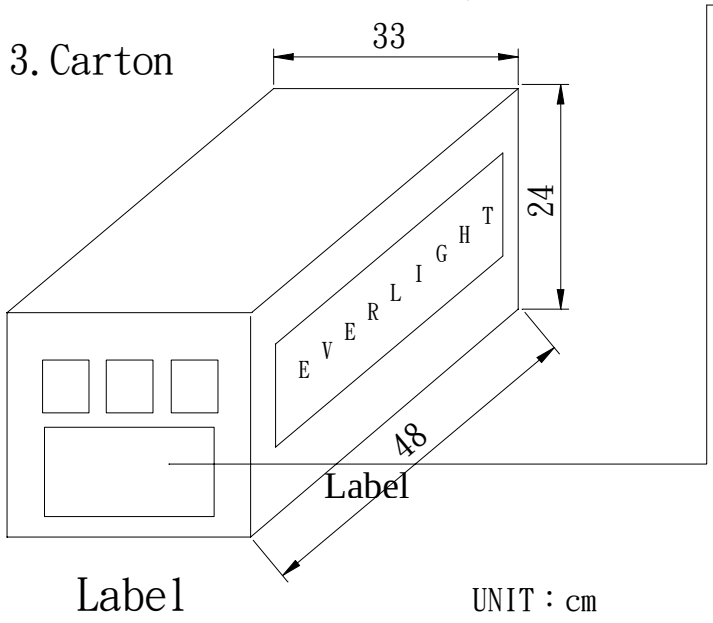
1. Bag



2. Box



3. Carton



UNIT：cm

CPN：Customer's Production Number
P/N：Production Number
QTY：Packing Quantity
CAT：Ranks
HUE：Peak Wavelength
REF：Reference
LOT NO：Lot Number
MADE IN TAIWAN：Production Place

Packing Quantity Specification

1.1000Pcs/1Bag，10Bags/1Box
2.10Boxes/1Carton