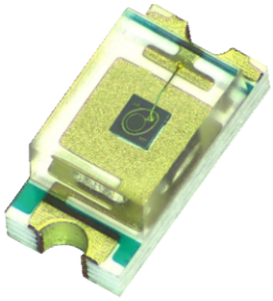
NDT4742

Product introduction

The NDT4742 is an InGaAs avalanche photodiode with high operation frequency and high multiplication gain in a small package.



Features

Top surface photosensitive structure

Active area：Diameter 200um

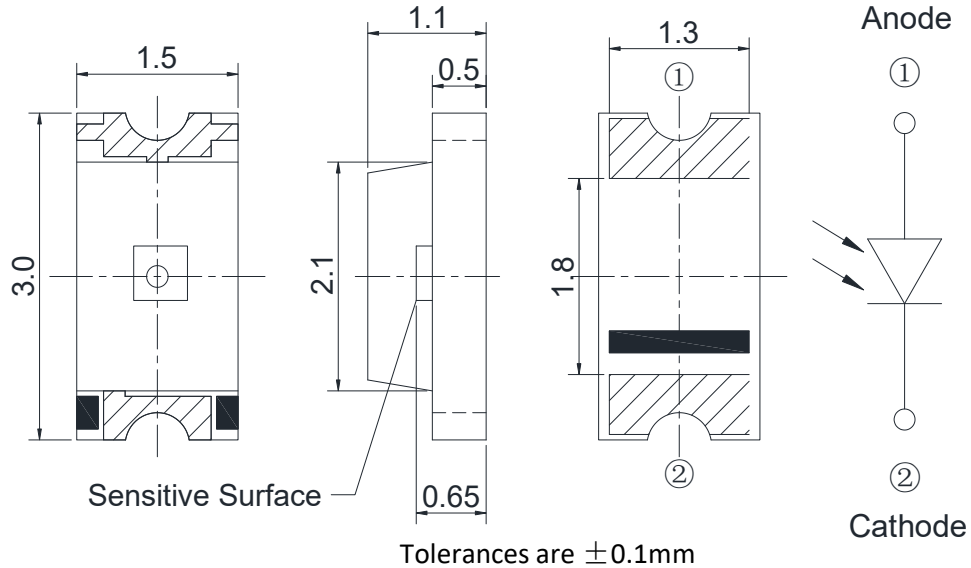
Application

Laser range finder,alarming,radar

Ultra weak pulse optical detecting

Optical communication

DEVICE DIMENSIONS（mm）



Tolerances are ±0.1mm

MAXIMUM RATINGS

(Ta= 25℃)

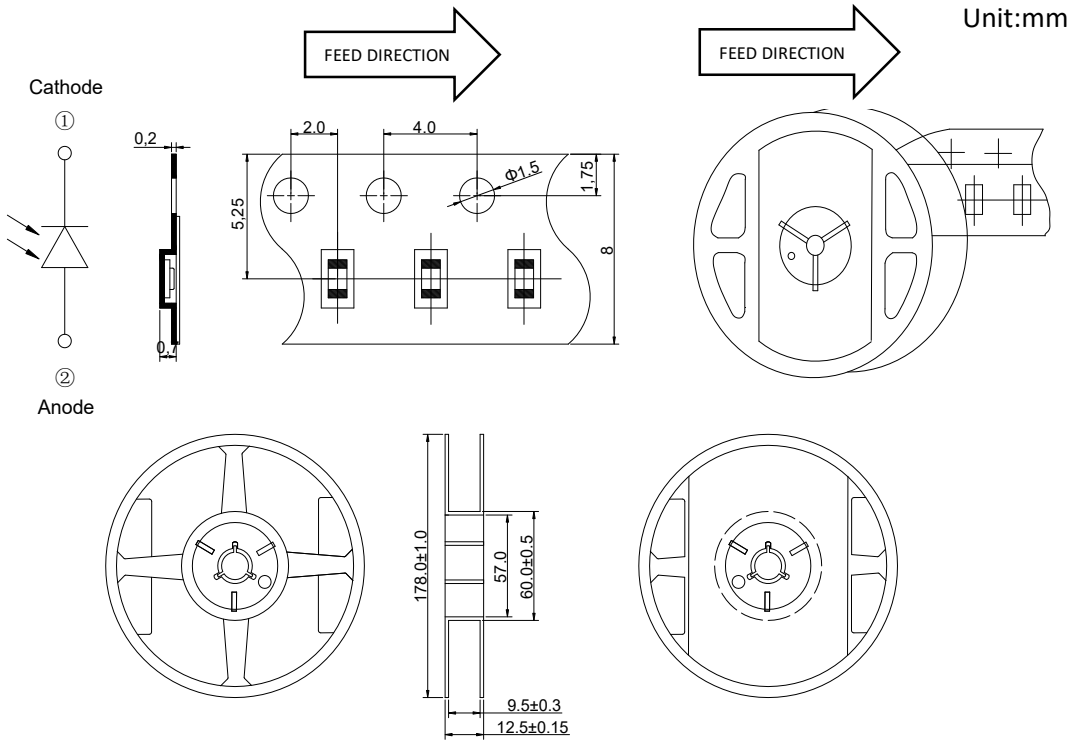
Item	Symbol	Rating	Unit
Operating temp.	Topr.	-20～+60	℃
Storage temp.	Tstg.	-40～+80	℃
Soldering temp.	Tstg.	260	℃

Electro-optical characteristics

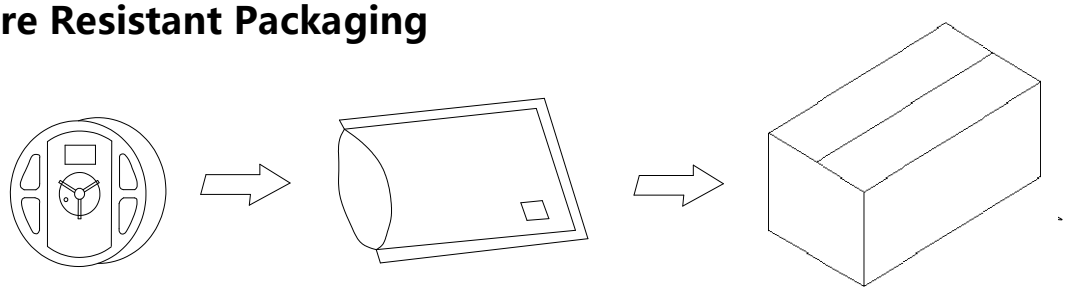
(Ta= 25℃)

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Responsivity	R	V_R@M=1,λ=1550nm	-	1	-	A/W
Dark current	I_D	V_R=0.9 V_{BR}	-	200	-	nA
Maximum optical input	P_{max}	M=10,R_L=10k,Turn on/off time~5s	-5	-	-	dBm
Reverse Breakdown Voltage	V_{BR}	I_R=100uA	30	-	70	V
Excess Noise index	n	-	-	0.55	-	-
Diameter for active area	-	-	-	200	-	um
Cutoff Frequency	f_C	M=10	-	1	-	GHz
Gain	M	-	10	-	-	-
Capacitance	Ct	f=1MHz，V_R=0.9 V_{BR}	-	2.6	-	pF
Reverse Breakdown Voltage Temperature Coefficient	δ	-	-	0.035	-	V/K
Epoxy Reflectance Value	ρ	λ=1550nm	-	1.56	-	-

Carrier Tape Dimensions



Moisture Resistant Packaging



1 Reel(2,000pcs) 1bag(1Reel) 1box(5 Bag)

Note:

1.All Dimensions are in millimeters, Tolerance is ±0.2mm unless otherwise noted .

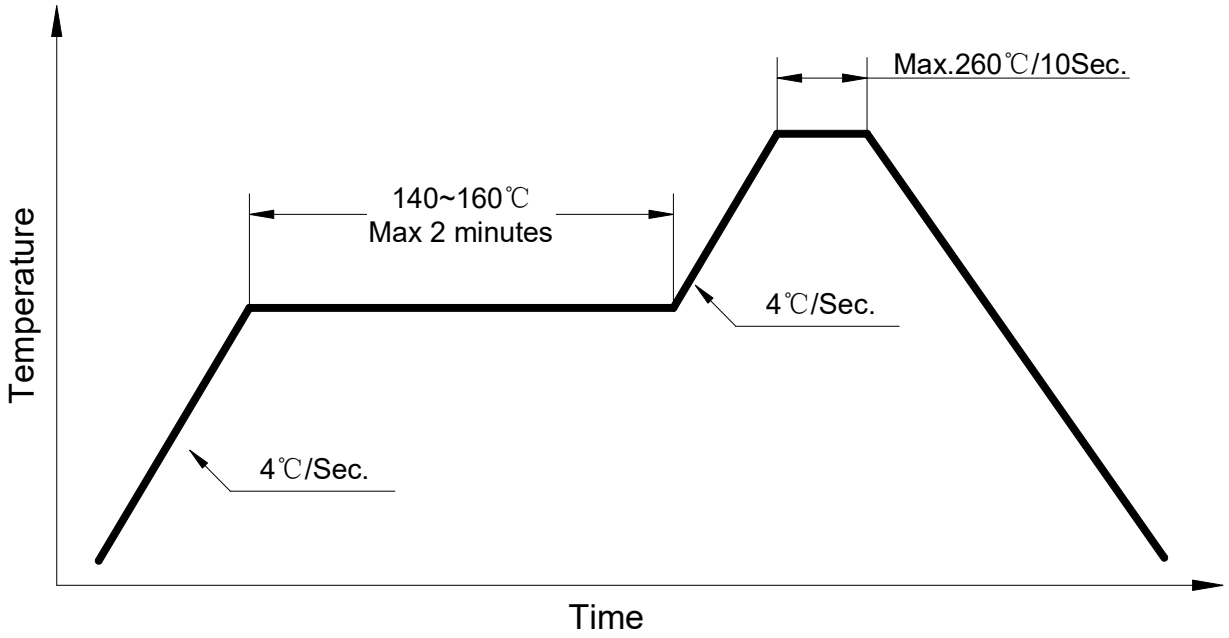
2.Specifications are subject to change without notice.

3.1Bag:2,000pcs , 1Box:10,000pcs.

4. Packing with vacuum moisture-proof and anti-static bags.

5.Desiccant are put into the each bag.

Reflow Soldering Temp/Time Profile



CAUTION

1.Before the bag is opened, please keep the following storage condition:
Temperature: 5℃-30 ℃,Humidity:RH 60% Max ,Time:12 Months.

2. After this bag is opened , The device that will be applied to infrared reflow,vapor-phase reflow,or equivalent soldering process must be :

a)Stored at less than 20% RH;

b)Mounted within 168hours： Temperature: 30℃ Max, Humidity:RH 60% Max；

c)When opened the Bag,the value of Humidity card is exceed 30%,Baking is required before mounting.

3.If above conditions are not met , baking is required before mounting.
Baking condition :12 hours at 60±3℃ and <5% RH.