

NMOP-10029

1. Description

The NMOP-10029 is a high-sensitivity & surface mount type silicon phototransistor. It's ideal for various kinds of optical emitters such as touch panels for C/D, ATM, Car navigation system and even AV Instrument and various types of disk driver.

2. Features

- Compact and thin package
- Top View Type
- SMD type
- Reflow soldering
- RoHS & High reliability package

3. Applications

- Touch screen for ATM
- Touch screen for Car navigation system
- Touch screen for FA equipment
- AV instrument
- Various types of disk driver

4. Absolute Maximum Ratings (Ta = 25° C)

Parameter	Symbol	Conditions	Min.	Max.	Unit
Collector-Emitter Voltage	V_{CEO}	-	-	20	V
Emitter-Collector Voltage	V_{ECO}	-	-	5	V
Collector Current	I_C	-	-	20	mA
Collector Power Dissipation	P_C	-	-	75	mW
Operating Temperature	$T_{opr.}$	-	-20	85	°C
Storage Temperature	$T_{stg.}$	-	-30	85	°C
Soldering Temperature *1	$T_{sol.}$	-	-	260	°C

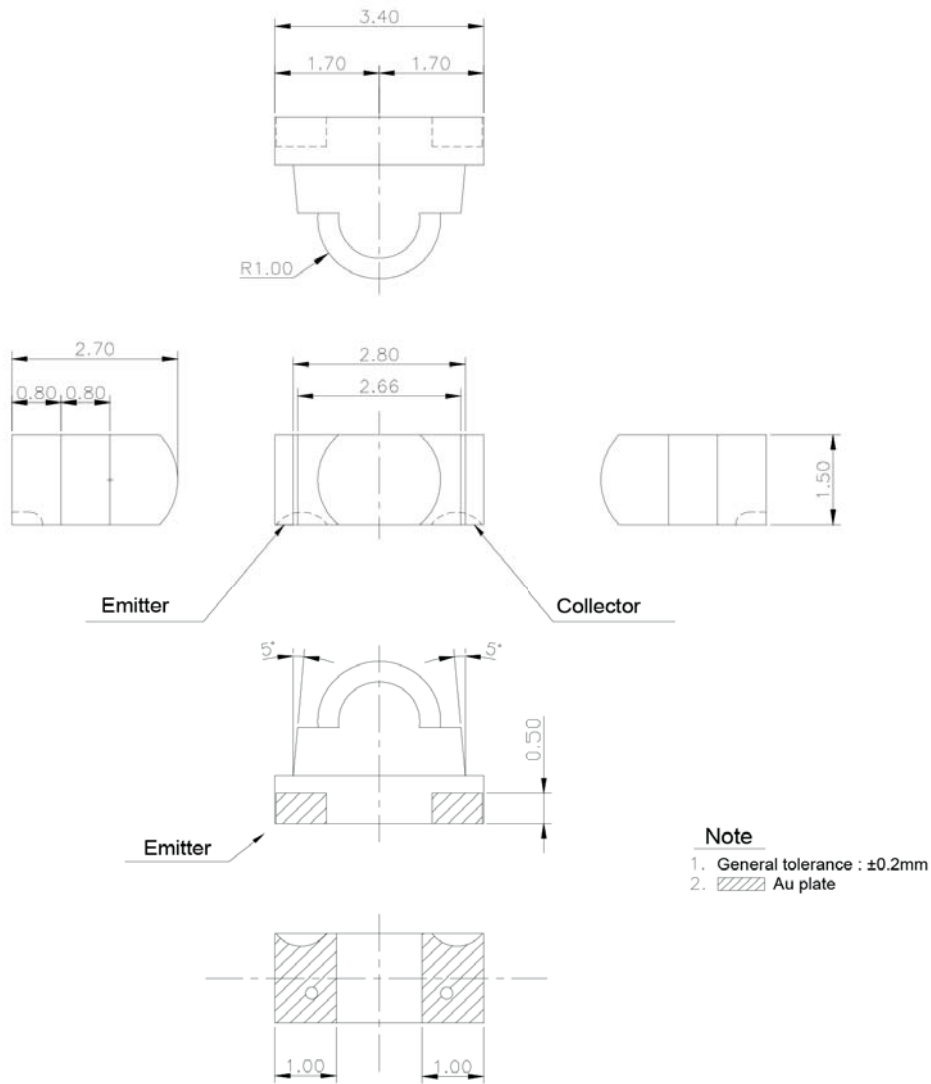
*1: Max 10s

5. Electro-optical Characteristics [Ta= 25]

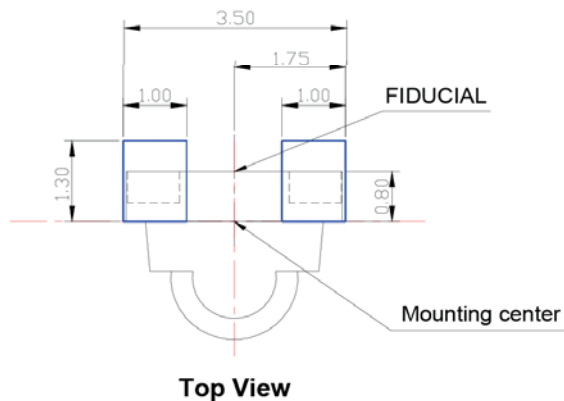
Parameter	Symbol	Conditions-	Min.	Typ.	Max.	Unit
Dark Current	I_{CEO}	$E_v=0, V_{CE}=20V$	-	1.0	100	nA
Collector Current	I_C	$E_v=1000lx, V_{CE}=5V$	4.0	6.0	-	mA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$E_v=1000lx, I_C=0.8mA$	-	-	0.4	V
Collector-Emitter Breakdown Voltage	B_{VECO}	$E_v=0, I_{CE}=0.1mA$	35	90	-	V
Emitter-Collector Breakdown Voltage	B_{VECO}	$E_v=0, I_{CE}=0.1mA$	6.0	7.5	-	nm
Spectral Sensitivity	λ	-	700	-	1050	nm
Peak Sensitivity Wavelength	λ_p		-	880	-	nm
Half Angle	$\Delta\theta$		-30	-	30	deg

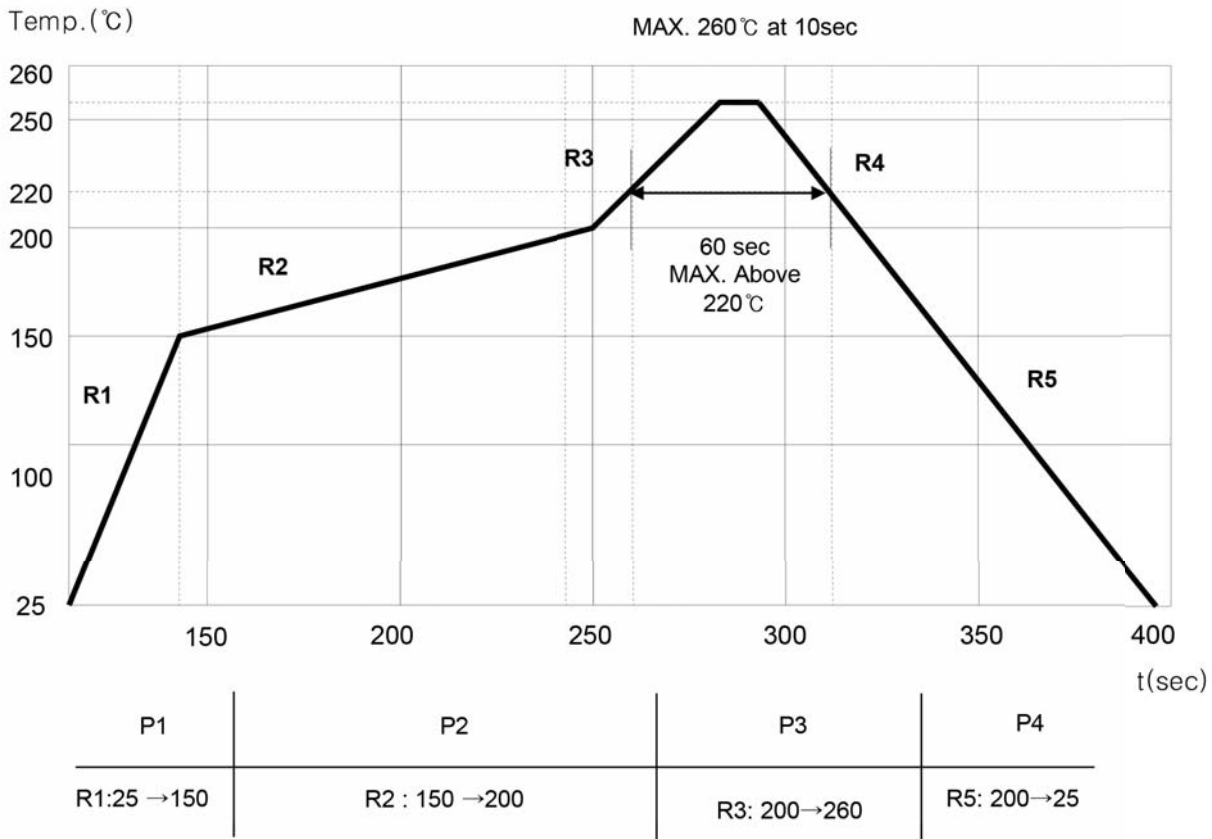
6. Package Outlines

[Unit : mm]



Recommended pattern



NMOP-10029
7. Reflow Profile

Notes

- Pb free solder spec
 1. Maker: Almit
 2. Part Num: LFM-48WTM-TS
 3. Alloy composition (wt%) : Sn-3.0Ag-0.5Cu
 4. Solidus Temp: 217° C
 5. Liquidus Temp : 220° C

For manual soldering, you have to complete the soldering within 3 seconds under 380° C (the temperature at the tip of soldering iron)
- We guarantee this part for twice reflow processes.
- The second reflow should be taken within 24 hours since the first reflow completed.

8. Moisture Guidelines

To avoid moisture absorption during transportation and storage, NMOP-10028 reels are packed in shielding bag. Once opened, moisture absorption begins. So the user must keep these parts in a recommended environment to prevent moisture entry.

→ Storage conditions : 10 ~30° C, < 60% RH

Baking Conditions

If the parts are not stored in dry conditions, they must be baked before reflow to prevent damage to the parts. Please conform to the following notes, when the user uses parts that have been unpacked over 24 hours.

In Reels: - 60° C for 48 hours or more

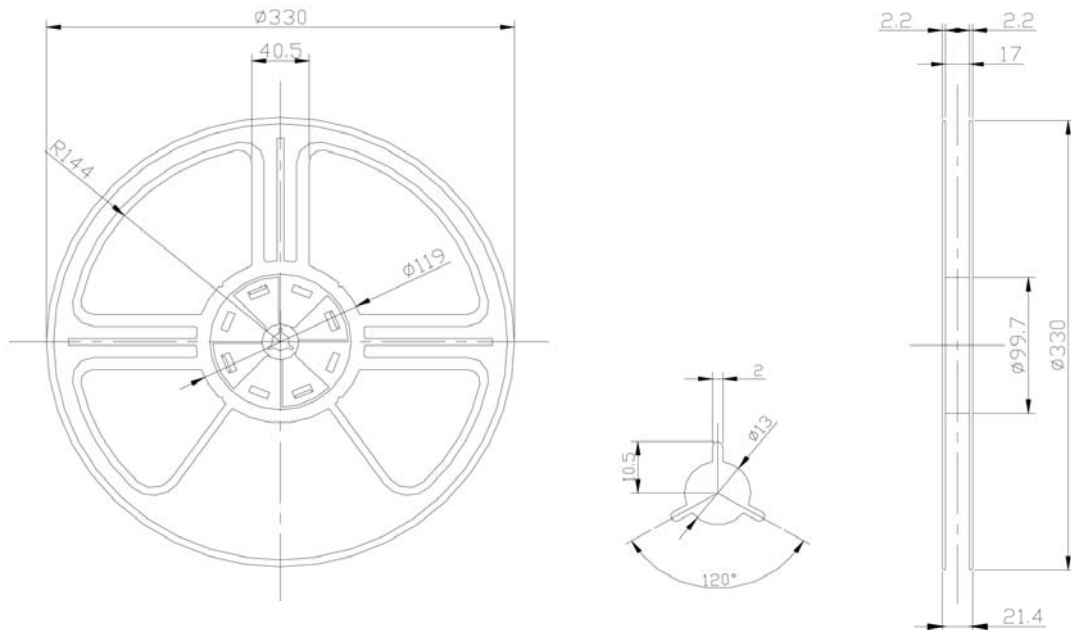
In Bulk - 100° C for 4 hours or more

NMOP-10029

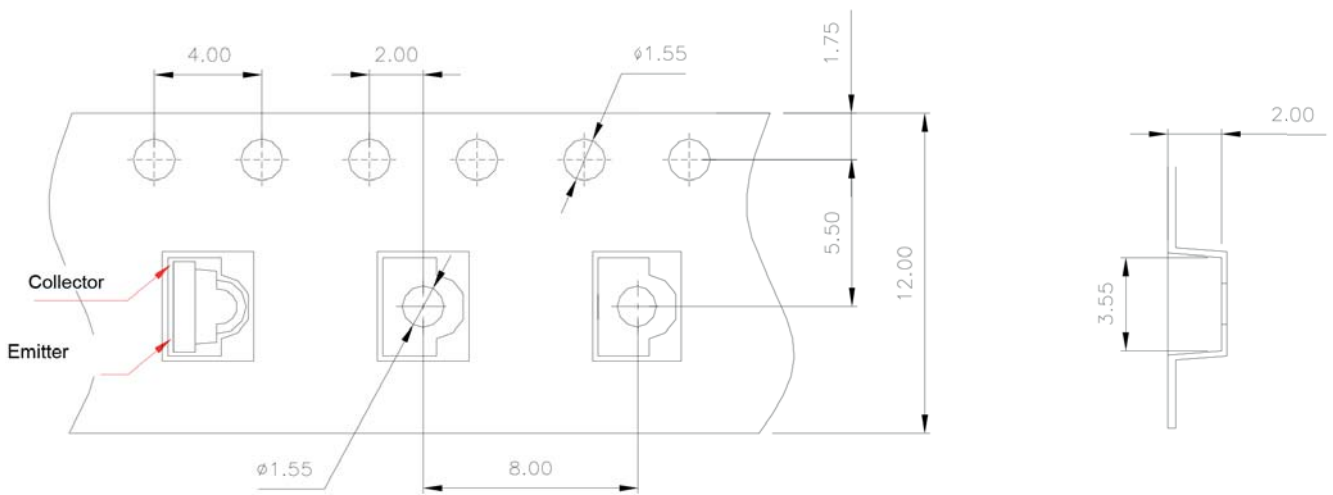
9. Tape and Reel Specifications

■ Top view type

[Unit : mm]

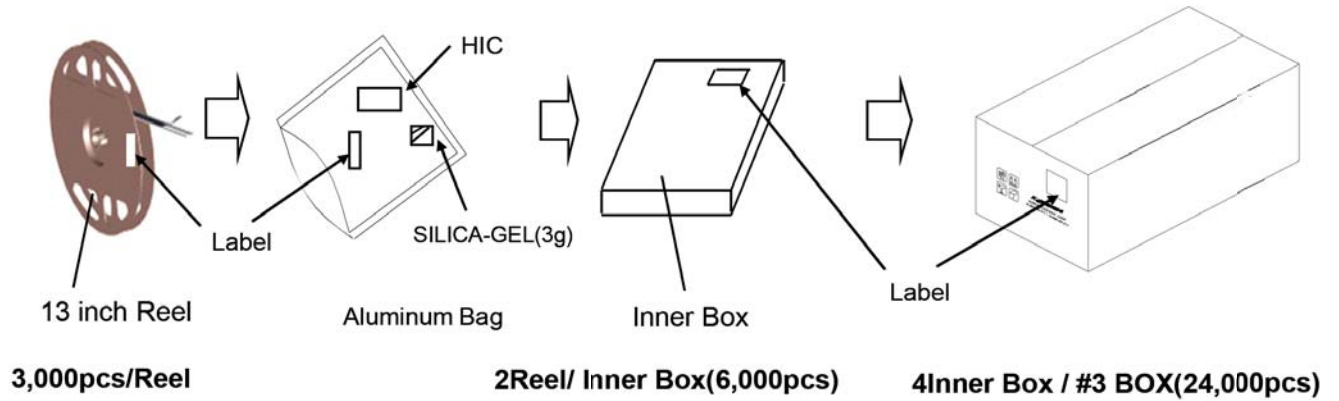


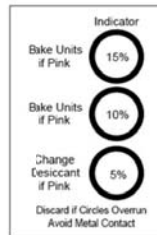
Reel Dimension



PACKING QUANTITY
3,000PCS/REEL

Tape Dimension

NMOP-10029
■ Packing Specification

1. DRY PACKING (SILICA-GEL)

2. DRY PACKING (HUMIDITY INDICATOR CARD)

3. BAR CODE

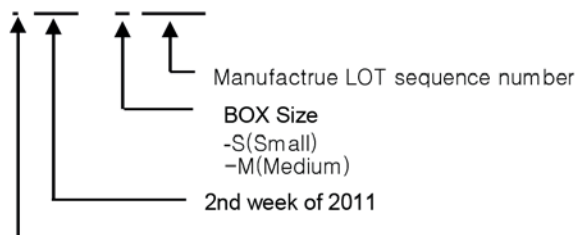
TYPE	Q'TY
LOT No.	DATE 2011-01-05
USER CODE	RoHS

S 

Type : Part No.

Q'TY : Quantity [pcs]

DATE : Date of Manufacturing

LOT No. :


10. Caution On Usage

- 10-1. Store products where there is no exterior force causing product to be deformed or change in quality.
- 10-2. Store and use where there is no Hydrogen Sulfide gas, or any other corrosive gas.
- 10-3. Do not allow dirt or dust to fill in the active lens part.
- 10-4. Do not cleanse as cleansing may be let in the package. If necessary use airblow or a soft cloth soaked in cleansing agent.

11. Guarantee Period And Scope

- 11-1. Period
 - One year after shipment to desired place.
- 11-2. Scope
 - Replacement of products will be carried out if the problem lies in our company's product, However, we are not liable for your damage due to lack of caution.

12. Others

- 12-1. Any doubts concerning this specification should be discussed fully by both parties.