



东莞星响传感器技术有限公司

Dongguan Xing Xiang sensor technology Co., Ltd

公司简介

东莞市星响传感器技术有限公司成立于 2005 年，是一家具有深厚敏感元材料技术的高新技术企业，由资深元器件行业经营团队组建，立志成为一家优秀的专业开发、生产、经营电子元器件之通路商。主要生产各类 NTC 热敏电阻，高精度 NTC sensor 温度传感器. 品种齐全业届屈指可数。也可高效配合客户生产各种非标品的热敏电阻。为追求更完美的品质公司采取三化一稳定严进严出的管理理念，让每一位员工都成为星响的主人公。

星响始终秉承“高效”、“负责”、“守信”、“双赢”的经营理念，在同行业中有较高的声望。为客户提高采购效率和电路优化设计提供最贴心的方案支持。

选用热敏电阻选星响是您的最好选择，我们期待与广大对于生活有美好向往的客户建立长期稳定的合作伙伴关系，选择了星响您将后顾之忧，三年保换，终生保修。

Company profile

Dongguan Xingxiang Sensor Technology Co., Ltd. was established in 2005. It is a high and new technology enterprise with deep sensitive metamaterials technology. It is set up by the management team of senior component industry. It is determined to be an excellent professional development, production and management of electronic components. It mainly produces all kinds of NTC thermistors and high precision NTC sensor temperature sensors. It can also efficiently cooperate with customers to produce various kinds of non-standard thermistors. In pursuit of a more perfect quality, the company adopts the management concept of "Three modernizations, one stability, strict entry and strict exit", so that every employee can become the xiangxiang hero.

Xingxiang has always been adhering to the "efficient", "responsible", "trustworthy", "win-win" business philosophy, in the same industry has a high reputation. Provide the most intimate support for customers to improve procurement efficiency and optimize circuit design.

Choosing the thermistor to select the star is your best choice. We look forward to establishing a long-term and stable partnership with the customers who have a good yearning for life.

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NTC Thermistor: XNE Series



EPOXY Encapsulated Type for Temperature -controlled/Measure

XNE Features

1. RoHS compliant
2. Halogen-Free (HF) series are available
3. Body size: $\Phi 1.8\text{mm}$, $\Phi 2.6\text{mm}$
4. Radial lead resin coated
5. Long leads for easy sensor placement
6. Operating temperature range: $-40^{\circ}\text{C}\sim+100^{\circ}\text{C}$
7. Wide resistance range



Recommended Applications

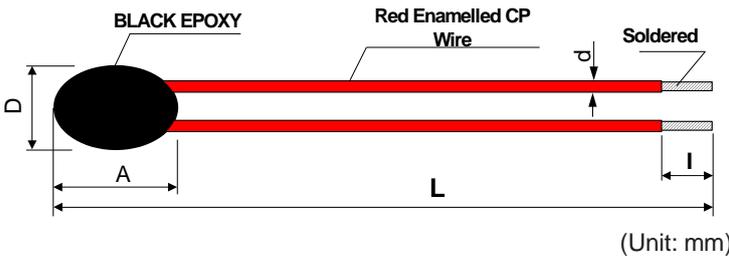
1. Home appliances
2. Computers
3. Battery packs
4. Thermometers

Part Number Code

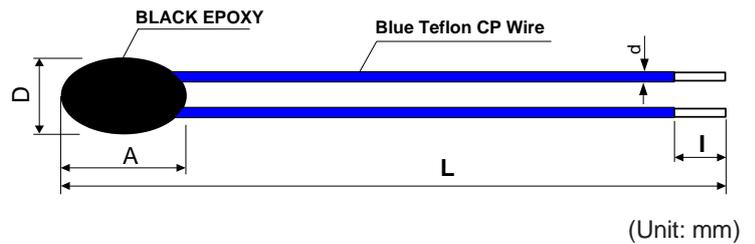
| | | | | | | | | | | | | | | | | |
|---|---|---|---|--|---|--|---|-----------------------------------|--|----|----|----------------------|----|-------------------------------------|--------------------|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | |
| X | N | E | 3 | 1 | 0 | 3 | F | A | 3 | 4 | D | 1 | E | 0 | 0 | |
| XINGXIANG NTC Thermistor XNE Series | | | Size | Zero Power Resistance at 25°C (R25) | | Tolerance of R25 | | Definition of B Value | B Value | | | Tolerance of B value | | Appearance | Optional suffix | |
| | | | 1:2mm 2:1.6mm 3:1.5mm 4:1.3mm 5:1.2mm 6:1.0mm 7:0.9mm | 103:10*10 ³ Ω | | F:1% G:2% H:3% J:5% K:10% A:0.5% B:0.75% | | A:B25/85 B:B25/50 X:special | The first two digits are unchanged and the latter represents two digits. 1:10...9:90 A:15 B:25...I:95 example 34D:3435 395:3950 | | | 1:1% 2:2% 3:3%... | | E:enmelled wire T:teflon cp wire | | |

Structure and Dimensions

R Type



T Type



| P/N | Dmax. mm | Amax. mm | L | I | d(±0.05) |
|------|----------|----------|-------|-------|----------|
| XNE1 | 2.0 | 6 | ----- | ----- | 0.3 |
| XNE2 | 1.6 | 5 | ----- | ----- | 0.28 |
| XNE3 | 1.5 | 5 | ----- | ----- | 0.28 |
| XNE4 | 1.3 | 5 | ----- | ----- | 0.2 |
| XNE5 | 1.2 | 5 | ----- | ----- | 0.18 |
| XNE6 | 1.0 | 5 | ----- | ----- | 0.18 |
| XNE7 | 0.9 | 5 | ----- | ----- | 0.18 |

Note: D&L size is available upon request.

NTC Thermistor: XNE Series

EPOXY Encapsulated Type for Temperature -controlled/Measure



Electrical Characteristics

| Part No. | Zero Power Resistance at 25°C | Tolerance of R ₂₅ | B Value | Tolerance of B value | Max. Power Dissipation at 25°C | Dissipation Factor | Thermal Time Constant | Operating Temperature Range | |
|----------------|-------------------------------|------------------------------|---------|----------------------|--------------------------------|--------------------|-----------------------|-------------------------------------|------------|
| | R ₂₅ (KΩ) | (±%) | (K) | (±%) | P _{max} (mW) | δ(mW/°C) | τ (Sec.) | T _L ~T _U (°C) | |
| XNE#202□A 34D* | 2 | 1,2,3,5 | 25/85 | 3435 | 2, 3 | 45 | ≥ 1 | ≤ 10 | -40 ~ +100 |
| XNE#502□A 347* | 5 | | | 3470 | | | | | |
| XNE#502□A 395* | 5 | | | 3950 | | | | | |
| XNE#103□A 34D* | 10 | | | 3435 | 1, 2, 3 | | | | |
| XNE#103□A 395* | 10 | | | 3950 | | | | | |
| XNE#103□A 39H* | 10 | | | 3975 | | | | | |
| XNE#113□A 39H* | 11 | | | 3975 | | | | | |
| XNE#223□A 374* | 22 | | | 3740 | | | | | |
| XNE#503□A 395* | 50 | | | 3950 | | | | | |
| XNE#503□A 409* | 50 | | | 4090 | | | | | |
| XNE#104□A 400* | 100 | | | 4000 | 2, 3 | | | | |
| XNE#104□A 419* | 100 | | | 4190 | | | | | |
| XNE#104□A 436* | 100 | | | 4360 | 25/50 | | | | |
| XNE#474□A 457* | 470 | | | 4570 | | | | | |
| XNE#B202□B338* | 2 | | 3380 | 2, 3 | | | | | |
| XNE#B502□B342* | 5 | | 3420 | | | | | | |
| XNE#B502□B390* | 5 | | 3900 | 1, 2, 3 | | | | | |
| XNE#B103□B338* | 10 | | 3380 | | | | | | |
| XNE#B103□B391* | 10 | | 3910 | | | | | | |
| XNE#B103□B39D* | 10 | | 3935 | | | | | | |
| XNE#B113□B39D* | 11 | 3935 | | | | | | | |
| XNE#B223□B370* | 22 | 3700 | | | | | | | |
| XNE#B503□B392* | 50 | 3920 | | | | | | | |
| XNE#B503□B402* | 50 | 4020 | | | | | | | |
| XNE#B104□B39D* | 100 | 3935 | 2, 3 | | | | | | |
| XNE#B104□B412* | 100 | 4120 | | | | | | | |

Note 1: # = Size of D

□ = Tolerance of R₂₅

* = Tolerance of B value

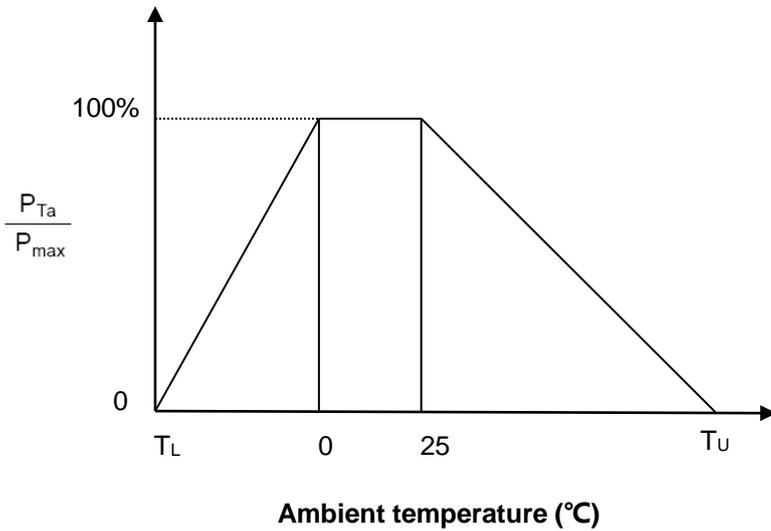
Note 2: Special specifications are available upon request.

NTC Thermistor: XNE Series

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Max. Power Dissipation Derating Curve



T_U : Maximum operating temperature (°C)

T_L : Minimum operating temperature (°C)

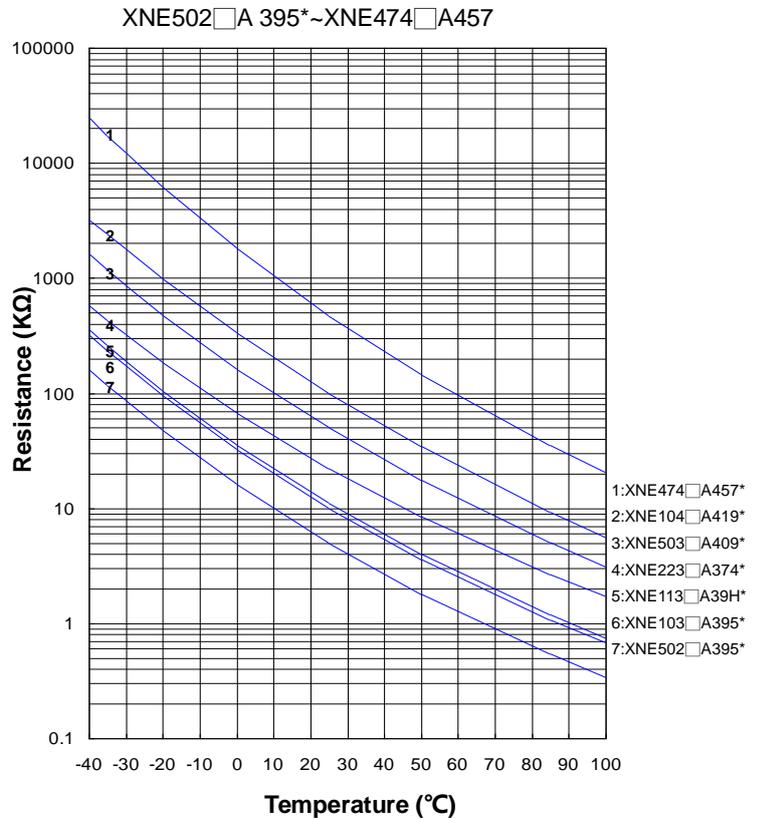
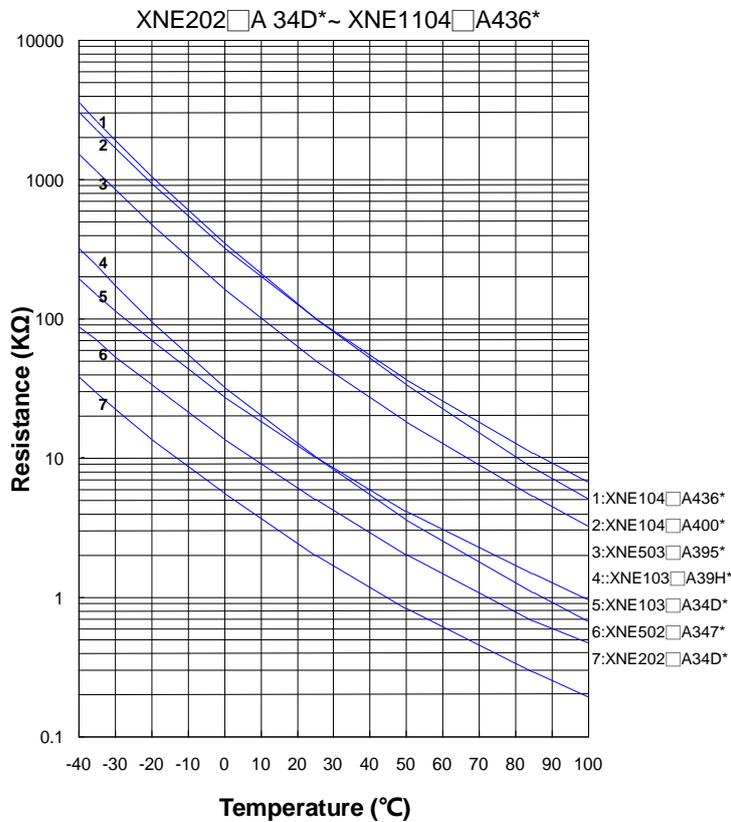
For example:

Ambient temperature(T_a) = 55°C

Maximum operating temperature(T_U) = 100°C

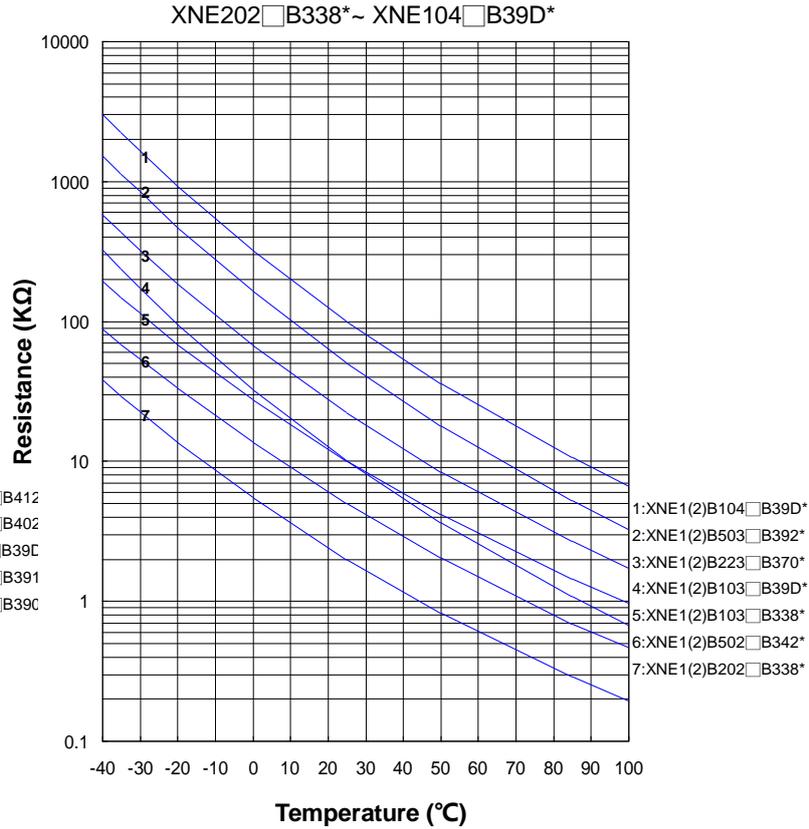
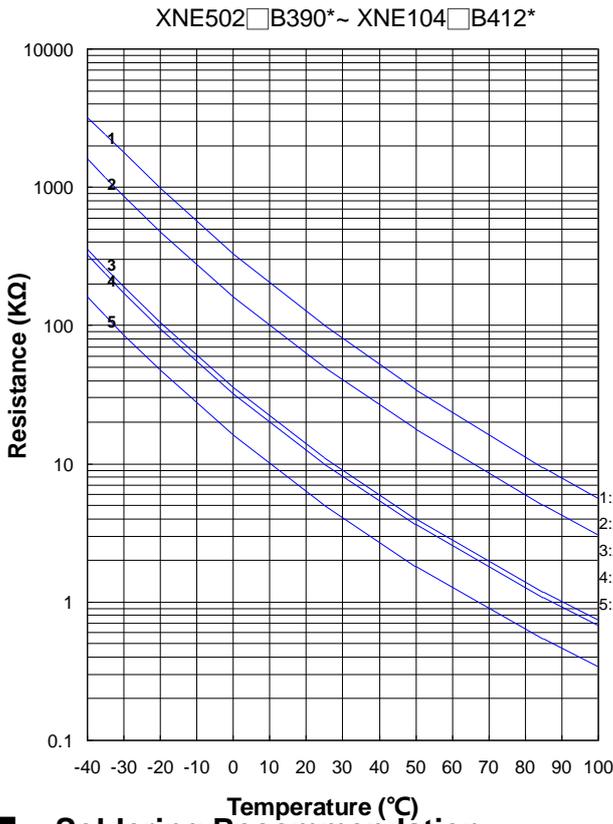
$$P_{Ta} = (T_U - T_a) / (T_U - 25) \times P_{max} = 60\% P_{max}$$

R-T Characteristic Curves



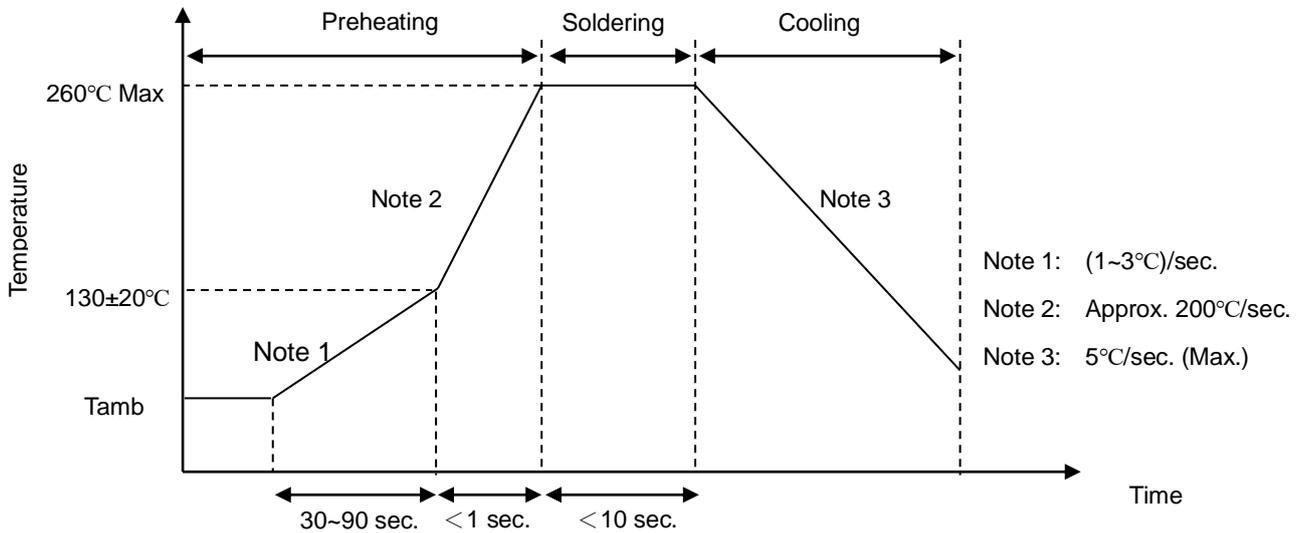
NTC Thermistor: XNE Series

EPOXY Encapsulated Type for Temperature -controlled/Measure



■ Soldering Recommendation

● Wave Soldering Profile



● Recommended Reworking Conditions With Soldering Iron

| Item | Conditions |
|-----------------------------------|---------------|
| Temperature of Soldering Iron-tip | 360°C (max.) |
| Soldering Time | 3 sec. (max.) |
| Distance from Thermistor | 10 mm (min.) |

NTC Thermistor: XNE Series

EPOXY Encapsulated Type for Temperature -controlled/Measure



■ Reliability

| Item | Standard | Test conditions / Methods | Specifications | | | | | | | | | | | | | | | |
|----------------------------------|-----------------------|---|--|------------------|------------------|------|---------------------|--------|--------------------|------------------|-------------------|---|---------|--------|---|------------------|-------|--|
| Tensile Strength of Terminations | IEC 60068-2-21 | Gradually apply the specified force and keep the unit fixed for 10±1 sec. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Terminal diameter (mm)</td> <td style="text-align: center;">Force (Kg)</td> </tr> <tr> <td style="text-align: center;">$d \leq 0.25$</td> <td style="text-align: center;">0.10</td> </tr> <tr> <td style="text-align: center;">$0.25 < d \leq 0.3$</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td style="text-align: center;">$0.3 < d \leq 0.5$</td> <td style="text-align: center;">0.5</td> </tr> </table> | Terminal diameter (mm) | Force (Kg) | $d \leq 0.25$ | 0.10 | $0.25 < d \leq 0.3$ | 0.25 | $0.3 < d \leq 0.5$ | 0.5 | No visible damage | | | | | | | |
| Terminal diameter (mm) | Force (Kg) | | | | | | | | | | | | | | | | | |
| $d \leq 0.25$ | 0.10 | | | | | | | | | | | | | | | | | |
| $0.25 < d \leq 0.3$ | 0.25 | | | | | | | | | | | | | | | | | |
| $0.3 < d \leq 0.5$ | 0.5 | | | | | | | | | | | | | | | | | |
| Bending Strength of Terminations | IEC 60068-2-21 | Hold specimen and apply the force specified below to each lead. Bend the specimen to 90°, and then return to the original position. Repeat the procedure in the opposite direction. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Terminal diameter (mm)</td> <td style="text-align: center;">Force (Kg)</td> </tr> <tr> <td style="text-align: center;">$d \leq 0.25$</td> <td style="text-align: center;">0.05</td> </tr> <tr> <td style="text-align: center;">$0.25 < d \leq 0.3$</td> <td style="text-align: center;">0.125</td> </tr> <tr> <td style="text-align: center;">$0.3 < d \leq 0.5$</td> <td style="text-align: center;">0.25</td> </tr> </table> | Terminal diameter (mm) | Force (Kg) | $d \leq 0.25$ | 0.05 | $0.25 < d \leq 0.3$ | 0.125 | $0.3 < d \leq 0.5$ | 0.25 | No visible damage | | | | | | | |
| Terminal diameter (mm) | Force (Kg) | | | | | | | | | | | | | | | | | |
| $d \leq 0.25$ | 0.05 | | | | | | | | | | | | | | | | | |
| $0.25 < d \leq 0.3$ | 0.125 | | | | | | | | | | | | | | | | | |
| $0.3 < d \leq 0.5$ | 0.25 | | | | | | | | | | | | | | | | | |
| Solderability | IEC 60068-2-20 | 245 ± 3°C, 3 ± 0.3 sec. | At least 95% of terminal electrode is covered by new solder | | | | | | | | | | | | | | | |
| Resistance to Soldering Heat | IEC 60068-2-20 | 260 ± 3°C, 10 ± 1 sec. | No visible damage ΔR ₂₅ /R ₂₅ ≤ 3 % | | | | | | | | | | | | | | | |
| High Temperature Storage | IEC 60068-2-2 | 100 ± 5°C, 1000 ± 24 hrs | No visible damage ΔR ₂₅ /R ₂₅ ≤ 5 % | | | | | | | | | | | | | | | |
| Damp Heat, Steady State | IEC 60068-2-78 | 40 ± 2°C, 90~95% RH, 1000 ± 24 hrs | No visible damage ΔR ₂₅ /R ₂₅ ≤ 3 % | | | | | | | | | | | | | | | |
| Rapid Change of Temperature | IEC 60068-2-14 | The conditions shown below shall be repeated 5 cycles. <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Period (minutes)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40 ± 5</td> <td>30 ± 3</td> </tr> <tr> <td>2</td> <td>Room temperature</td> <td>5 ± 3</td> </tr> <tr> <td>3</td> <td>100 ± 5</td> <td>30 ± 3</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>5 ± 3</td> </tr> </tbody> </table> | Step | Temperature (°C) | Period (minutes) | 1 | -40 ± 5 | 30 ± 3 | 2 | Room temperature | 5 ± 3 | 3 | 100 ± 5 | 30 ± 3 | 4 | Room temperature | 5 ± 3 | No visible damage ΔR ₂₅ /R ₂₅ ≤ 3 % |
| Step | Temperature (°C) | Period (minutes) | | | | | | | | | | | | | | | | |
| 1 | -40 ± 5 | 30 ± 3 | | | | | | | | | | | | | | | | |
| 2 | Room temperature | 5 ± 3 | | | | | | | | | | | | | | | | |
| 3 | 100 ± 5 | 30 ± 3 | | | | | | | | | | | | | | | | |
| 4 | Room temperature | 5 ± 3 | | | | | | | | | | | | | | | | |
| Max. Power Dissipation | IEC 60539-1 4.26.3 | 25 ± 5°C, Pmax., 1000 ± 24 hrs | No visible damage ΔR ₂₅ /R ₂₅ ≤ 5 % | | | | | | | | | | | | | | | |

■ Packaging

- Bulk Packing: 500 pcs/bag

■ Warehouse Storage Conditions of Products

- Storage Conditions :
 1. Storage Temperature: -10°C~+40°C
 2. Relative Humidity: ≤75%RH
 3. Keep away from corrosive atmosphere and sunlight.
- Period of Storage : 1 year

