LXP35

Power Type Thick Film Non Inductive Resistor

Product Features

• Installed on the radiator, with a rated power of 35 watts at 25℃; The rated power is 2.5 watts at room temperature of 25℃ without using heat sinks

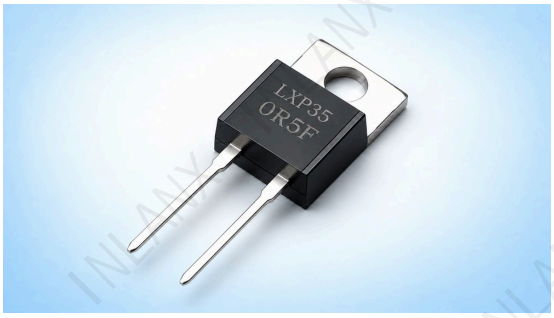
• TO-220 power type package

• With just one screw, it can be installed on the radiator

• The conductive part is insulated from the metal substrate, with high insulation level

• Highly protective molded plastic outer box, and easy to install

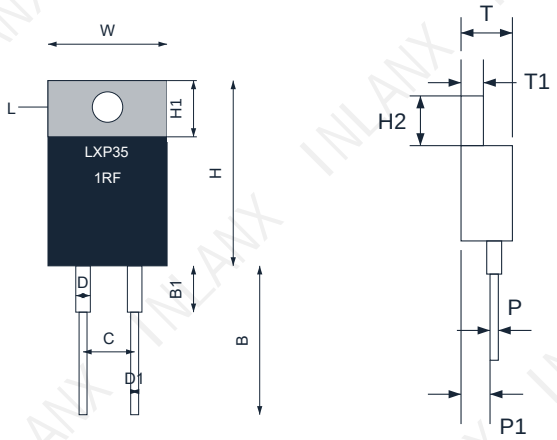
• Sensorless design



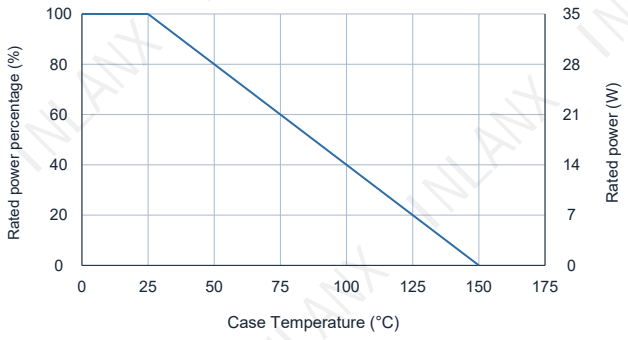
Applications

RF power amplifier, buffer circuit, switched power supply, automation controller, uninterruptible power supply, voltage regulation, low-energy pulse loading, UPS

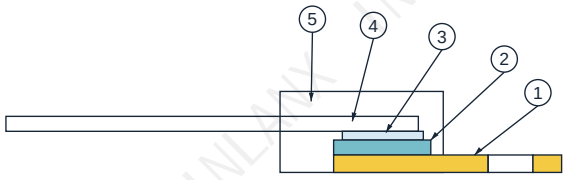
Dimensions (mm)



Derating Curve



Structural Diagram



1	Radiator Fin
2	Alumina Substrate
3	Resistor Layer
4	Copper Lead
5	Molding

Type	W ±0.3	H ±0.5	H1 ±0.1	H2 ±0.3	B ±0.5	B1 ±0.1	D ±0.1	D1 ±0.1	L ±0.1	C ±0.3	T ±0.3	T1 ±0.1	P ±0.1	P1 ±0.1
LXP35	10.1	15.0	3.0	6.35	14.0	3.25	1.35	0.8	3.6	4.3	4.5	1.15	0.60	2.08

LXP50

Power Type Thick Film Non Inductive Resistor

Product Features

• Installed on the radiator, with a rated power of 50 watts at 25℃; The rated power is 3 watts at room temperature of 25℃ without using heat sinks

• TO-220 Molded plastic packaging

• Only one M3 (3mm) screw is needed to install it on the radiator

• Highly protective molded plastic outer box, and easy to install

• High insulation degree

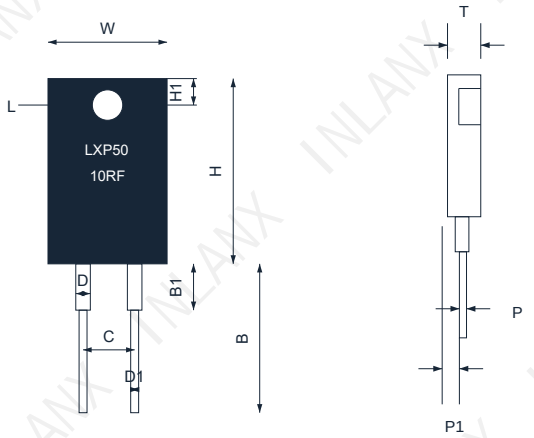
• Sensorless design



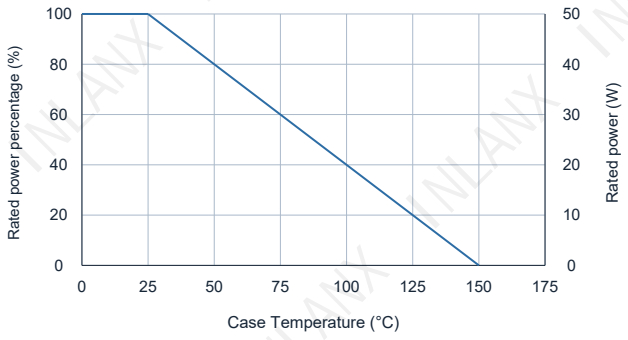
Applications

Used for the inlet end of power supplies, low-energy pulse loads, terminal resistors of RF power amplifiers, voltage rectifiers, buffer circuits, UPS

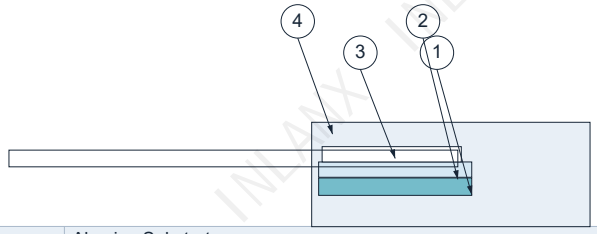
Dimensions (mm)



Derating Curve

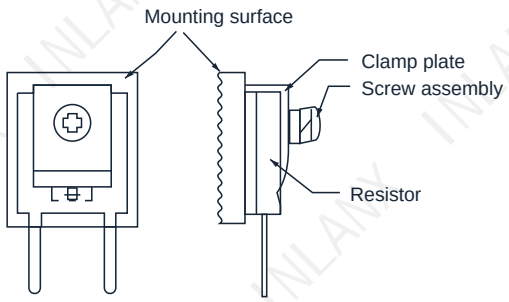


Structural Diagram



1	Alumina Substrate
2	Resistor Layer
3	Lead
4	Molding

Installation Diagram



Type	W ±0.3	H ±0.5	H1 ±0.1	B ±0.5	B1 ±0.1	D ±0.1	D1 ±0.1	L ±0.1	C ±0.3	T ±0.3	P ±0.1	P1 ±0.1
LXP50	10.8	15.8	3.18	12.5	3.2	1.35	0.8	3.18	4.3	3.2	0.6	1.6

LXP100

Power Type Thick Film Non Inductive Resistor

Product Features

• Installed on the radiator, with a rated power of 100 watts at 25℃; The rated power is 3.5 watts at room temperature of 25℃ without using heat sinks

• TO-247 molded plastic packaging

• Only one screw is needed to install it on the radiator

• Highly protective molded plastic outer box, and easy to install

• High insulation degree

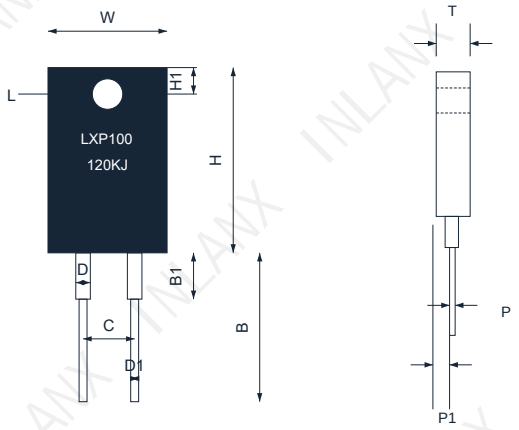
• Sensorless design



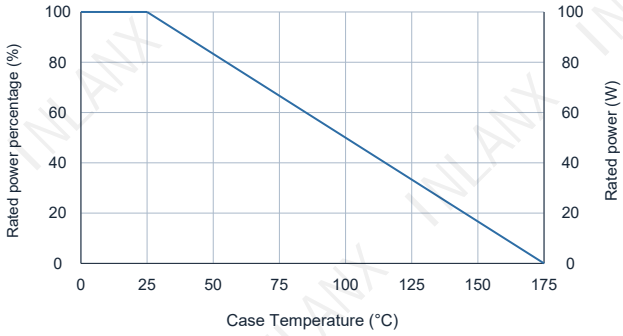
Applications

Used for the inlet end of power supply, power load and discharge resistor of screen picture tube, low-energy pulse load, voltage rectifier, buffer circuit, UPS

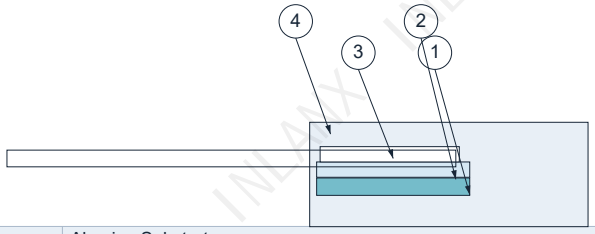
Dimensions (mm)



Derating Curve

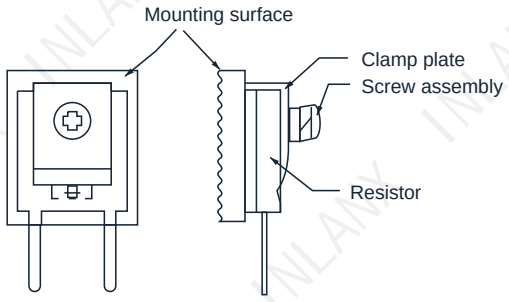


Structural Diagram



1	Alumina Substrate
2	Resistor Layer
3	Lead
4	Molding

Installation Diagram



Type	W ±0.3	H ±0.5	H1 ±0.1	B ±0.5	B1 ±0.1	D ±0.1	D1 ±0.1	L ±0.1	C ±0.3	T ±0.3	P ±0.1	P1 ±0.1
LXP100	15.6	20.4	5.4	14	2.4	3.6	1.45	3.6	8.7	4.9	0.6	2.1

LXP35S

Power Type Thick Film Non Inductive Resistor

Product Features

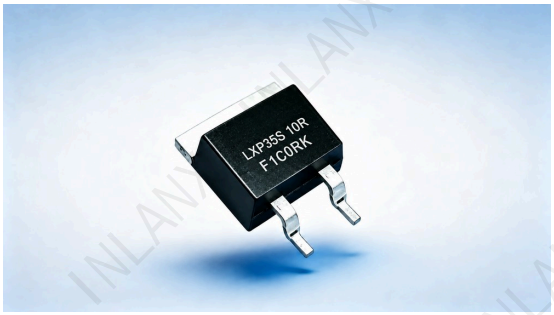
• Installed on the radiator, the center temperature of the bottom plate is ≤25℃, and the rated power is 35W; The rated power is 2.5 watts at room temperature of 25℃ without using heat sinks

• Surface mount (SMD) TO-263 molded package

• After adding heat sinks, the thermal resistance Rth is less than 4.28°K/W

• Can withstand reflow soldering temperature of 270℃/10S

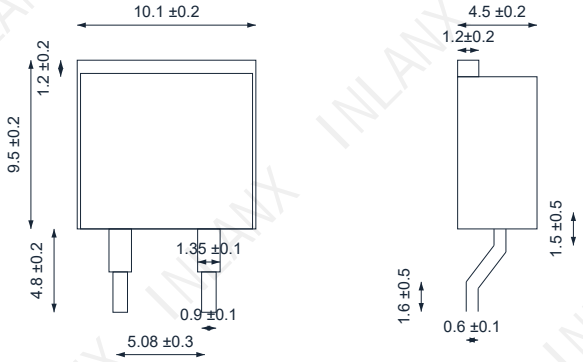
• Conductive parts and metal substrate insulation



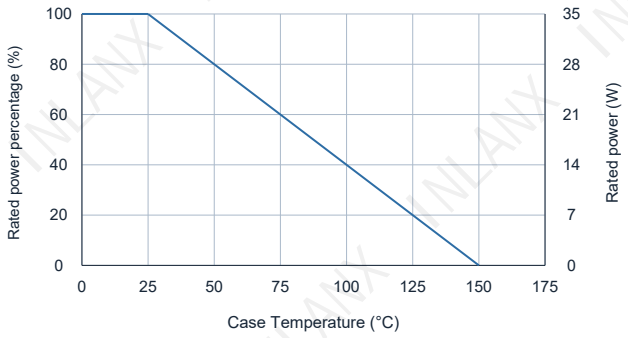
Applications

Switching Power Supplies, Snubbers Circuits, Automated Machine Controller, RF Power Amplifiers, Low Energy Pulse Loading - UPS, Voltage Regulatio

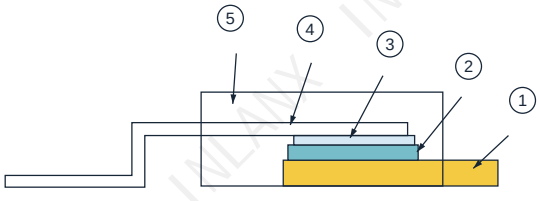
Dimensions (mm)



Derating Curve

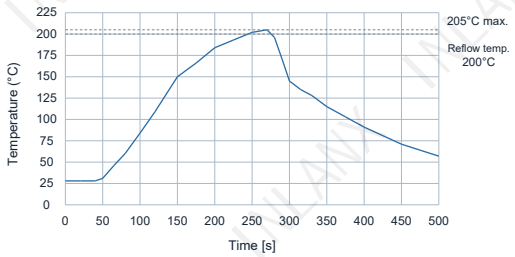


Structural Diagram



1	Radiator Fin
2	Alumina Substrate
3	Resistor Layer
4	Copper Lead
5	Molding

Reflow Soldering Curve



Maximum operating voltage	350V	Voltage endurance	1800VAC
Insulation resistance	10GΩ min	Working temperature range	- 65 °C to+150 °C

LXP35S / LXP35 / LXP50 / LXP100

Test Items & Ordering

Test Items and Methods

Test project	Basic Requirements	Test Method
Short term overload	LXP35S, LXP35, LXP50: △R±0.3%	2 times the rated power, but not exceeding 1.5 times the maximum withstand voltage, for 5 consecutive seconds
	LXP100: △R±0.5%	1.5 times the rated power, but not exceeding 1.5 times the maximum withstand voltage, for 5 consecutive seconds
Load Life	△R±1.0%	2000 hours at rated power
Humidity test	△R±0.5%	LXP35S, LXP35, LXP50: Maintain 1000 hours at maximum operating voltage at 40±2℃ and 90-95% humidity (1.5 hours "on", 0.5 hours "off")
		LXP100: -Maintain at maximum operating voltage for 240 hours at 10℃~+65℃ and humidity>90%
solderability	More than 90% covered with new tin	245±5℃ for 3 seconds
Thermal Shock	LXP35S, LXP35, LXP50: △R±0.3%	65℃~+150℃, 100 cycles
	LXP100: △R±0.5%	
Lead strength	△R±0.2%	(Tensile test) 2.4 Newtons
High-frequency vibration	LXP35S, LXP35, LXP50: △R±0.2%	20 grams of vibration
	LXP100: △R±0.4%	
Dielectric Strength	△R±0.15%	1800v AC, 60 seconds
Temperature Cycling	ΔR±0.3%	-65°C~+150°C, 1000 cycles

Ordering Example: LXP-100-120R-J

LXP	100	120R	J
Product type LXP	Power 100 Watts	Resistance 120R	Accuracy D: 0.5% F: ±1% J: ±5%

HXP200

Power Type Thick Film Non Inductive Resistor

Product Features

• Wide resistance range, small size, high power, good heat resistance

• It can be easily installed with 2 M4 screws.

• The height of the resistor is extremely low on the terminal surface, at 11.8mm, and the terminal is a copper plate bushing that can be directly installed with M4 screws.

• The standard quantity of terminals is 4, which can be changed to 2 or 3.

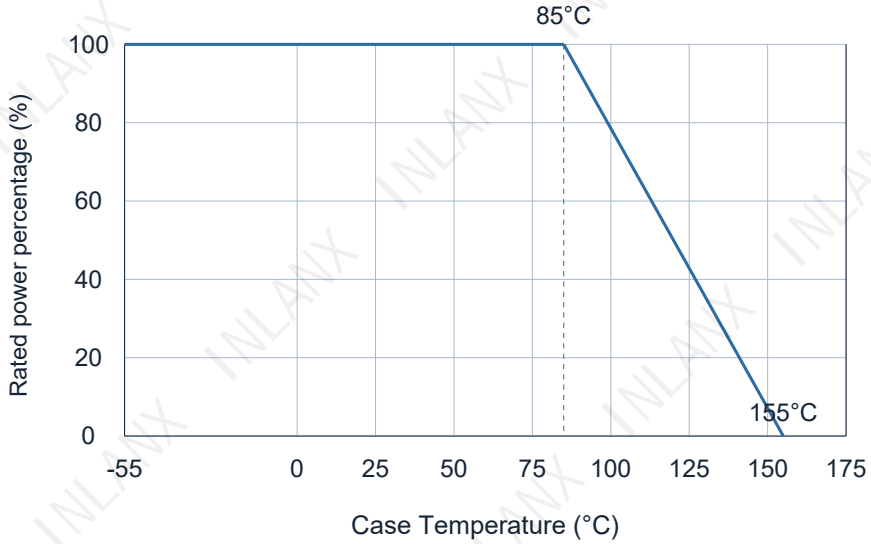
• SOT-227 standard packaging



Applications

Mainly used in variable speed drives, power supply, control equipment, communication, automatic control, engine control, etc. Suitable for inverter circuits, pulse circuits, and high-frequency circuits.

Power Derating Curve



Performance Parameters

Model	Rated power (W)	Resistance range	Resistance tolerance	Temperature coefficient (PPM/℃)	Maximum working voltage U max (V)	Withstanding voltage (KV/AC)
HXP200	200W	0.1Ω ~ 1MΩ	±1%、±2% ±5%、±10%	±50、±100、±250	500V	4

HXP200

Test Items & Performance

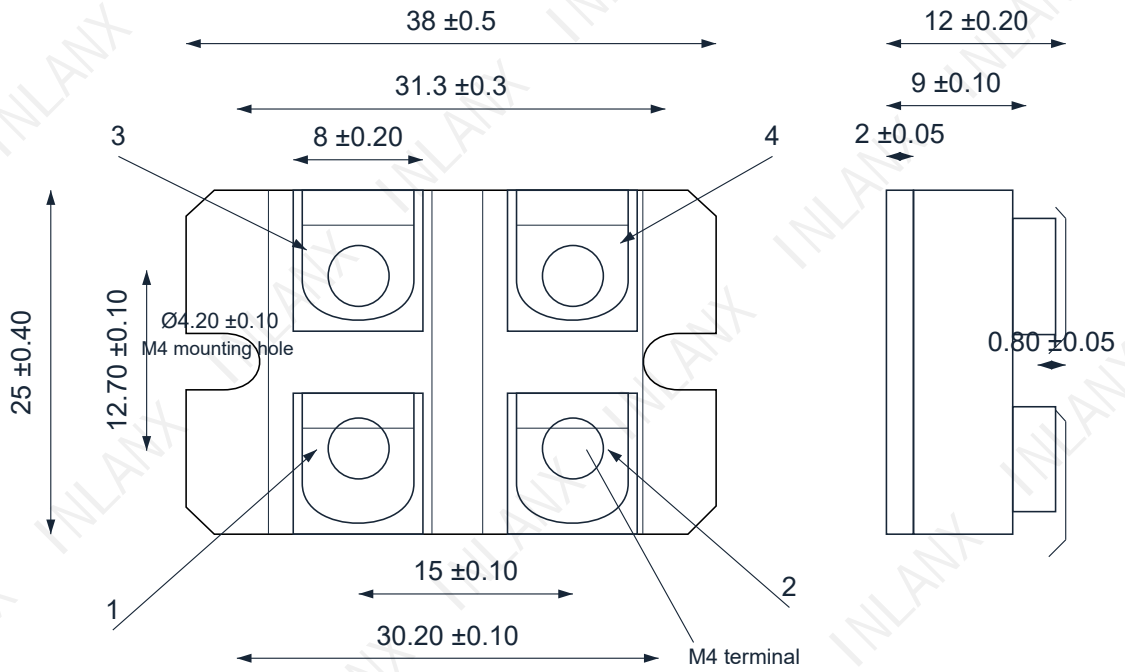
Test Items

Test items	Experimental conditions	Performance indicators
Rapid temperature changes	-55℃ to +155℃, after five cycles; Extreme temperature exposure time: 30 minutes; Conversion time: 1-2 minutes	The resistor should have no visible damage and clear markings, △R≤±(0.5%R+0.05Ω)
Temperature coefficient of resistance	-55℃ to +155℃	TCR within ±150X10-6/K
insulation resistance	Under normal weather conditions, test the insulation resistance between the metal heat dissipation plate of the resistor and the lead out terminal, with a test voltage (DC) of 500±5V	The insulation resistance should be ≥10GΩ
overload	Apply a DC voltage of twice the rated power (Us≤1.5Umax) for 5 seconds	The resistor should have no visible damage and clear markings, △R≤±(0.5%R+0.05Ω)
Damp heat steady state	Temperature: 40±2℃; Humidity of 95%; Time: 56 days	The resistor should have no visible damage and clear markings, △R≤±(0.5%R+0.05Ω)
life	Applied voltage: rated power DC voltage (UR≤U max), powered on for 1.5 hours, powered off for 0.5 hours, total duration 1000 hours	The resistor should have no visible damage and clear markings, △R≤±(0.5%R+0.05Ω)
withstanding voltage	Apply an effective AC voltage of 4000V for 1 minute ±5 seconds	The resistor has no breakdown or arcing phenomenon, and the leakage current is ≤10mA
vibrate	Conduct the test according to the requirements of GB/T2423.10-2019, with a vibration frequency of 10Hz, amplitude of 0.35mm, acceleration of 50m/s², 2 frequency scans in each direction, 3 directions, and a duration of 23 minutes in each direction	The plastic casing of the resistor should have no mechanical damage, and the resistance change should be within ±2%R+0.05Ω

HXP200

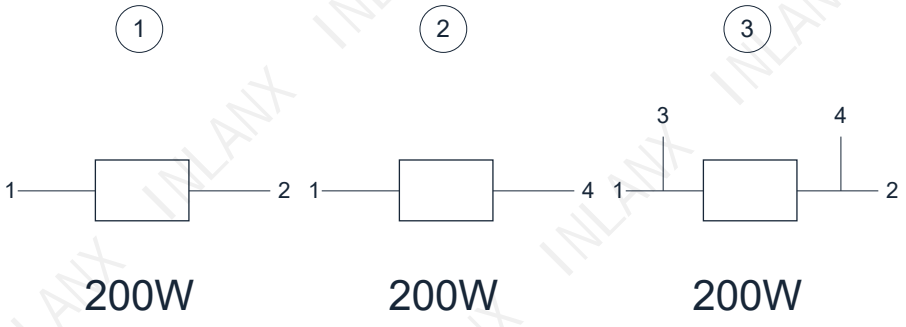
Dimensions, Circuit & Ordering

Dimensions (mm)



The lead out terminal in the lower left corner is the first lead out terminal, which rotates clockwise to become the second, third, and fourth lead out terminals, respectively

Circuit Structure Diagram



Ordering Example: HXP200-3-40RJ

HXP200	3	40R	J
Model	Circuit	Resistance	Accuracy F: ±1% G: ±2% J: ±5% K: ±10%

HXP200

Installation & Storage

Installation Instructions

• The resistor is installed on the heat sink with M4 screws, and the installation torque of the screws is 2N.m. It should be ensured that the product is installed firmly without shaking. In addition, screws should be equipped with anti loosening components such as flat washers, spring washers, anti loosening nuts, etc.

• M4 screws are used for the electrical installation of the resistor lead out end, with a torque of 1.3N.m. It should be ensured that the electrical connection is tight and there is no shaking. In addition, screws should be equipped with anti loosening components, such as flat washers, spring washers, etc., to prevent electrical connections from loosening due to vibration.

• A uniform layer of thermal grease should be applied between the resistor and the installation surface. It is recommended to use thermal grease products with a thermal conductivity of 1W/mK.

Storage

During storage, the product should be stored in a warehouse with an ambient temperature of -10℃ to +45℃, a relative humidity of no more than 85%, ventilation, dryness, and no acidic, alkaline, or other harmful substances around it