



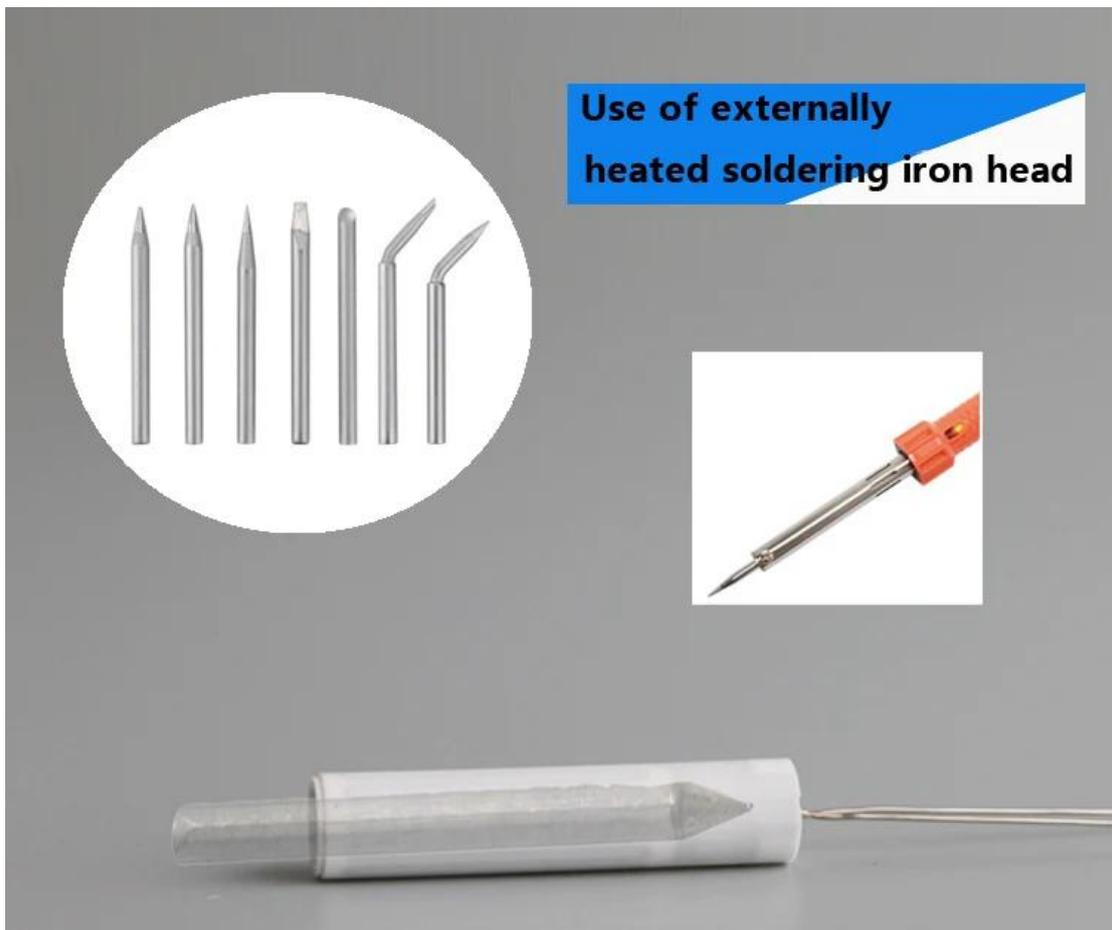
120v Ceramic Heating Element

120v Ceramic Heating Element were developed based on ceramic lamination technologies, which are mainly used for automotive and various industrial applications such as soldering iron, kerosene & gas equipment, pellet burner and water heating.

Model:GN4394T internal lead

120V Ceramic Heating Element

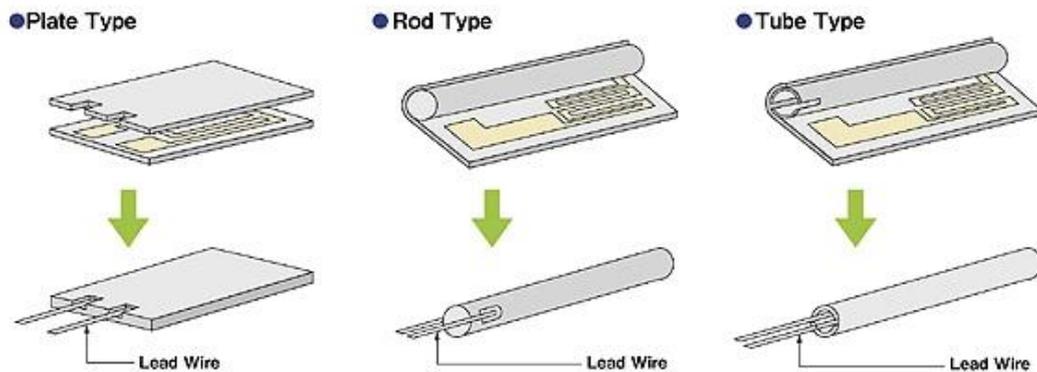
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Process of 120v Ceramic Heating Element

First, painting the high melting point metal (tungsten or molybdenum manganese) paste on to the Al₂O₃ casting briquette in coordinate to the circuit design, then another layer of sintering additives. After that, repeating the process to build multiple layers. Then, they are sintered together under 1600 °C hydrogen gas environment. Finally, nickel leads are brazed at 800 °C onto the metal end and put on with Teflon sleeve, which make it a MCH heating element.

Internal Heating elements are protected from oxidation due to sintering into one-piece ceramic body structure.



Material Properties of 120v Ceramic Heating Element

Thermal Properties

Item	Unit	Alumina Heater
Max Working Temperature	°C	1050
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Thermal Conductivity	W/ (m.k)	21
Specific Heat	J/(kg.k)	0.78*10 ³
Expansion	/°C(40~800°C)	0.78*10 ⁻⁶
Hardness (load 500g)	Gpa	13.5
Flexural	Mpa	320

Parameter of 120v Ceramic Heating Element

Heater Name	120v Ceramic Heating Element
Working Voltage	120V
Working Power	100W+/-10% or Customization
Dimension	Already Models or Customization
Heating Resistance	Already Models or Customization

Leads	Nickel wires from Heater Inside wall
Working Temperature	400~800℃
Insulation Sleeve	Accordingly

Configuration and Dimension							
Shape	Dimension	Tolerance		Tolerance		Tolerance	Resistance Tolerance
Plate	Length (mm)		Width(mm)		Thickness(mm)		
	10~120	① ≤20+/-0.3 ② ≥20+/-1	2~60	① ≤20+/-0.3 ② ≥20+/-1	0.55~2.0	① ≤1+/-0.1 ② ≥1+/-0.15	+/-10%
	length		Diameter				
Rod	8~121	① ≥30mm:+/-0.5 ② 30~100mm:+/-1.0 ③ ≤100mm~:+/-1.5	2.5~8	① ≥5mm:+/-0.1 ② 5~9mm:+/-0.2 ③ ≤9mm~:+/-0.3			+/-10%
Tube	8~121		2.5~20				+/-10%

Application

The aluminum ceramic heating core are widely used in all kinds of applications nowadays, such as: intelligent bidet seat, electric water heater, medical machine, dryer, electric heating splint, electric soldering iron, vacuum flask, electric cooker, electric bonder, capper, UTR cylinder condensation-proofer, IR physiotherapy equipment, intravenous injection heating, quick food heating, mini thermostatic bath for special crystal parts, automatic exhaust oxidation sensors, industrial equipment heater, and small heating appliance, etc.

Handling and notice of using ceramic heater core

For the sake of personal and heater safety, please read the following items carefully:

① Don't give the ceramic heater impact like falling down to the ground or strike it by hammer forcefully.

② Using ceramic heater at rating voltage.

High voltage may cause the damage of ceramic heater.

③ Temperature control device should be used on ceramic heater

And the surface temperature of ceramic heater should no more than 800℃, since the temperature is closely related to its working life.

④ Don't use ceramic heater on following conditions: quick heat up, quick cool down and uneven heat distribution. Because on the above conditions open circuit. cracking problems may happen. Please be careful of heat shock besides other situations that are not mentioned here such as incompletely contact with metal part that will also cause uneven heat distribution.

⑤ Don't put excess strength to Ni-wire and brazing area..If Ni wires were bent many times, power concentration points will become brittle. Crack even breakage may happen. If pulled Ni wires with excess power, brazing area will be peeled off.