12V Ceramic Heating Elements

12V Ceramic Heating Elements 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:7788

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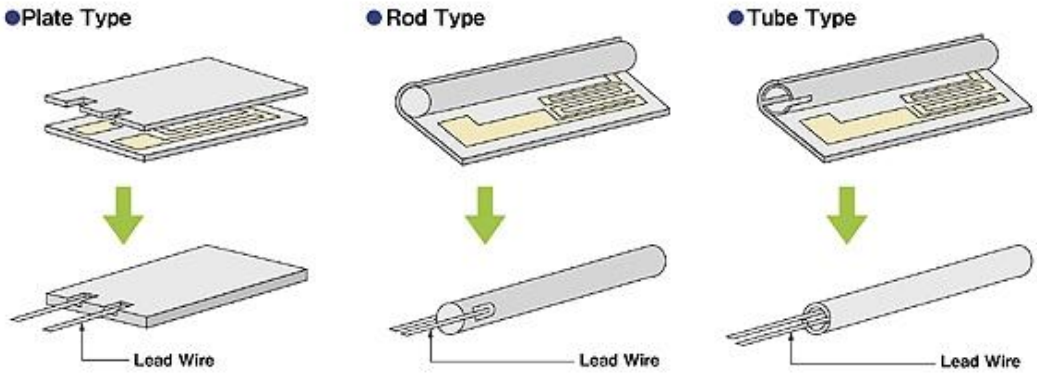
Process of 12V Ceramic Heating Elements

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 12V Ceramic Heating Elements

Item	Inspection Condition	Unit	Standard
Color			White
Density		g/cm3	3.7
Water absorption		%	0
Average grain size		μm	3 ~ 5
Hardness	Load 4.9N 4.9N	GPa	≥15
Flexural strength		MPa	≥274
Linear expansion coefficient	20 ~ 500℃	1×10-6mm/℃	6.5 ~ 7.5
	20 ~ 800℃		6.5 ~ 8.0
Thermal conductivity	20℃	W/(m·K)	≥20.9
Specific heat		kJ/(kg·K)	≥0.8
Insulation strength		KV/mm	≥12
Volume resistivity	20℃	Ohm.cm	≥1014
	300℃		≥1011
	500℃		≥109
Permittivity	1MHz		9 ~ 10
Dielectric loss tangent	1MHz		≤3×10-4

Surface roughness		μm	0.3 ~ 0.8

Features of 12V Ceramic Heating Elements

It is a new type of high efficient heater, which can save more than 20%-30% power effect compare to PTC ceramic heaters. Our alumina ceramic heaters have many excellent features:
High power density, excellent thermal efficiency
Rapid heating, non-hot spot temperature distribution
High temperature, small size, light weight

Parameter of Cordless Soldering Iron Heating Element

Heater Name	**12V Ceramic Heating Element**
Working Voltage	12V
Working Power	15W~90W
Dimension	Length 60mm* diameter 3.8mm or Customization
Leads	Nickel wires
Working Temperature	400~500℃
Insulation Sleeve	Accordingly

Application

Electronic cigarette, vaporizers, coffee machine, Intelligent toilet, instant electric kettle, instant water heater, intelligent basin faucet; hair straightener, hair curler, car exhaust oxide sensor, heating for industry device, ultrasonic heating element, mold heater, medical equipment heater ,air heater, small household appliances, etc.....

FAQ

1. How long for the delivery time of ceramic heaters?
In general, 1-30days according stock situation for already models,
New customized heating elements will be delivered as negotiation with our clients.

2. Can ceramic heating core be customized , such as shape or dimension?
Surely, heating core is welcome customized as your need.

3. May i know which payment will be accepted by your company?
So far 100%T/T against PO., or negotiation.