

# Products

## RZ08-42-1 Silicon Nitride Electric Heating Plug (Ceramic Electric Heating Plug)

Rated voltage: 8V

Rated current: 8.15-10A

Rated power: 65W~80W

\*Can be customised to suit customer requirements



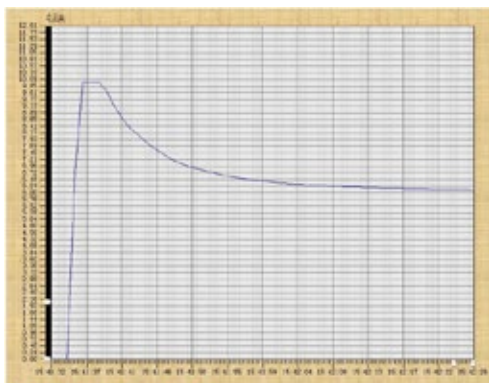
|  |                                       |                                     |  |
|--|---------------------------------------|-------------------------------------|--|
| Room temperature flexural strength               | $\geq 900\text{Mpa}$                  | Room temperature fracture toughness | $6.0\text{-}8.0\text{ Mpa}\cdot\text{m}^{1/2}$ |
| Bulk density                                     | $3.20\text{-}3.4\text{g}/\text{cm}^3$ | Room temperature volume resistivity | $10^{14}\ \Omega\cdot\text{cm}$                |
| Relative dielectric constant at room temperature | 6-7                                   | Thermal conductivity                | $23\text{-}25\text{W}/(\text{m}\cdot\text{k})$ |
| Coefficient of thermal expansion                 | $3.1 \times 10^{-6}/^\circ\text{C}$   | Hardness                            | HRA92-94                                       |

### Hot pressed silicon nitride ceramic electric plugs, preheating plugs, testing plugs performance characteristics:

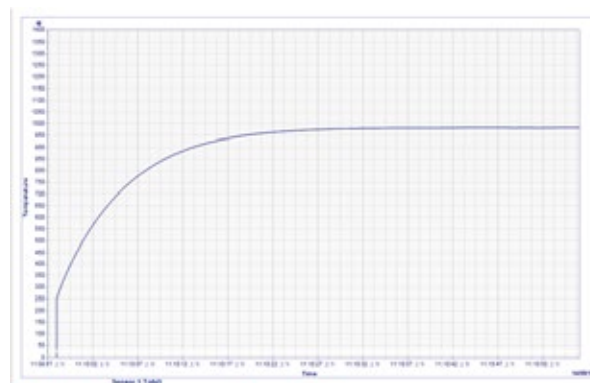
Silicon nitride ceramic electric heating plugs, igniters, preheating plugs and testing plugs are a series of products developed on the basis of the results of the "7th Five-Year" National Key Science and Technology Project "Ceramic Electric Heating Plugs for Vehicles" of the Shanghai Research Institute of Internal Combustion Engines, which are used for preheating diesel engines. The product adopts silicon nitride ceramic as the base material of the heating part, which overcomes the defects of the metal sleeve type electric heating plug such as not high temperature resistance, short service life and long preheating time. We have developed various shapes of high temperature ignition devices on this basis.

- ⊙ High temperature resistance, dry point up to  $1200^\circ\text{C}$
- ⊙ High surface load, dry point heating load up to  $25\text{w}/\text{cm}^2$
- ⊙ Acid and alkali resistant
- ⊙ Small size
- ⊙ Low thermal inertia and fast temperature rise.
- ⊙ Long life span: up to 5000h
- ⊙ Number of on/off: 10 5
- ⊙ Fast preheating: preheating temperature up to  $1000^\circ\text{C}$ , preheating time 3~5s
- ⊙ Good starting performance at low temperatures: reliable starting at  $-40^\circ\text{C}$
- ⊙ High temperature strength, suitable for parking heaters, high speed diesel engines, high temperature ignition units
- ⊙ Suitable for all high temperature ignition devices

### Comparison of the performance of silicon nitride ceramic heating plugs with metal heating plugs:



SN Heater Current(A).



SN Heater Temperature( $^\circ\text{C}$ ).