



Lanthanum Hexaboride Part

You can rest assured to buy customized Nextgen Lanthanum Hexaboride Part from us. Lanthanum Hexaboride, also called LaB6 cathode, is an inorganic chemical of rare earths. Nextgen Advanced Materials supplies Lanthanum Hexaboride Ceramic Parts with high quality and fast delivery, and customized products are available.

Product Description

You can rest assured to buy Nextgen Lanthanum Hexaboride Part from our factory and we will offer you the best after-sale service and timely delivery. Lanthanum Hexaboride, also called LaB6 cathode, is an inorganic chemical of rare earths. With melting point 2528 K, LaB6 cathode is a refractory ceramic material, which is insoluble in water or hydrochloric acid and very stable in vacuum.

The unique properties of lanthanum hexaboride crystals provide stable electron emitting media with work functions near 2.70 eV. The low work function yields higher currents at lower cathode temperatures than tungsten, which means greater brightness, or current at the beam focus, and longer LaB6 cathode life. Typically, LaB6 cathodes exhibit 10 times the brightness and 50 times the service life of tungsten cathodes. In electron microscope applications, these characteristics translate to more beam current in a smaller spot at the sample, improved resolution, and less frequent cathode replacement.



Lanthanum Hexaboride Ceramic Part Specification

Product	Lanthanum Hexaboride	Structure	Polycrystalline
Symbol	LaB6 cathode	Thermal Conductive	47 W/mK (20°C)
Cas No.	12008-21-8	Thermal Expansion	6.2

			10-6K-1 (20-900°C)
Atomic Mass	203.78 g/mol	Electrical Resistance	ca. 15 $\mu\Omega$ cm (20°C)
Density	4.72 g/cm ³	Electrical Conductive	6.65×10 ⁴ S/cm (20°C)
Melting Point	2528 K	Current Density	150 A/cm ² (1950°C)
Hardness	87.5 RA	Electron Emissivity	2.6 eV
Flexure Strength (σ)	200 Mpa	Fracture toughness (K _{1c})	3.0 MN/m ^{3/2}