



Cerium Hexaboride Rod

You can rest assured to buy Nextgen Cerium Hexaboride Rod from our factory and we will offer you the best after-sale service and timely delivery. Cerium Boride, also called Cerium Hexaboride or CeB₆, is a refractory ceramic material. Nextgen Advanced Materials supplies Cerium Hexaboride Rods with high quality and fast delivery, and customized products are also available.

Product Description

As the professional manufacture, we would like to provide you Nextgen Cerium Hexaboride Rod. And we will offer you the best after-sale service and timely delivery. Cerium Boride, also called Cerium Hexaboride or CeB₆, is a refractory ceramic material. The principal use of cerium hexaboride is a coating of hot cathodes, or hot cathodes made of cerium hexaboride crystals. It usually operates at temperature of 1450 °C.

Cerium hexaboride, like lanthanum hexaboride, slowly evaporates during the cathode operation. In conditions where CeB₆ cathodes are operated under 1850 K, CeB₆ should maintain its optimum shape longer and therefore last longer. While the process is about 30% slower than with lanthanum boride, the cerium boride deposits are reported to be more difficult to remove.



Material Data for LaB₆ and CeB₆

Parameter	Units	LaB ₆	CeB ₆
Stoichiometry	N/A	~6	
Metal Impurities	ppm by wt.	< 30	
Density	g/cm ³	4.72	4.80
Coefficient of Thermal Expansion	α x 10 ⁶	5.6	6.2

Electrical Resistivity	$\mu\Omega\text{-cm}$	~50	~65
Effective Work Function (100) at 1800 K	eV	2.70	2.65
Spectral Emissivity at 0.65 microns	N/A	0.765	0.779
Evaporation rate at 1800 K (UHV)	g/cm ² /s	2.2 x 10 ⁻⁹	1.6 x 10 ⁻⁹
Orientation limit for specific orientation	degrees	<2	
Pyrolitic block mount resistance @ 1800 K	Ohms	1.45	