

## Cerium Hexaboride Cathodes

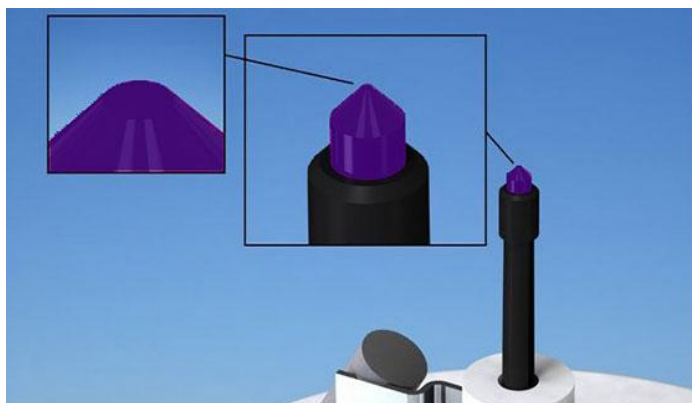
You can rest assured to buy Nextgen Cerium Hexaboride Cathodes from our factory and we will offer you the best after-sale service and timely delivery. Cerium Boride, also called Cerium Hexaboride or CeB<sub>6</sub>, is a refractory ceramic material. Nextgen Advanced Materials supplies Cerium Hexaboride Cathode with high quality and fast delivery, and customized products are also

available.

### Product Description

You can rest assured to buy customized Nextgen Cerium Hexaboride Cathodes from us. We look forward to cooperating with you, if you want to know more, you can consult us now, we will reply to you in time! Cerium Boride, also called Cerium Hexaboride or CeB<sub>6</sub>, 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 CeB<sub>6</sub> cathodes are operated under 1850 K, CeB<sub>6</sub> 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 LaB<sub>6</sub> and CeB<sub>6</sub>

Parameter	Units	LaB <sub>6</sub>	CeB <sub>6</sub>
Stoichiometry	N/A	~6	
Metal Impurities	ppm by wt.	<30	

Density	g/cm <sup>3</sup>	4.72	4.80
Coefficient of Thermal Expansion	$\alpha \times 10^6$	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 <sup>2</sup> /s	$2.2 \times 10^{-9}$	$1.6 \times 10^{-9}$
Orientation limit for specific orientation	degrees	<2	
Pyrolytic block mount resistance @ 1800 K	Ohms	1.45	