



### **Cerium Hexaboride Sheet**

Cerium Boride, also called Cerium Hexaboride or CeB<sub>6</sub>, is a refractory ceramic material. Nextgen Advanced Materials supplies Cerium Hexaboride sheets with high quality and fast delivery and customized products area also available

### **Product Description**

As the professional manufacture, we would like to provide you high quality Nextgen Cerium Hexaboride Sheet. 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. 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 LaB6 and CeB6**

Parameter	Units	LaB6	CeB6
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	
Pyrolitic block mount resistance @ 1800 K	Ohms	1.45	