

**Z-808 ZTM, 99.99%      Black Tablet:  $\phi 8 \times 6$  mm (substitute for  $ZrO_2+TiO_2$ )**

Melting Point	1900°C
Transmission Range	0.3-9 micron
Refractive Index	n=2.05 (500-550nm)
Density	4.90 g/cm <sup>3</sup>
Evaporation Temperature	2500°C
Substrate Temperature	175-250°C
Rate of Condensation	10-20A <sup>0</sup> /sec
Recommended Source	Water cooled Copper crucible by electron beam gun

This is a new  $ZrO_2+TiO_2$  oxide mixture metallized material. The normal  $ZrO_2 +TiO_2$  are  $ZrO_2+TiO_2$  ceramic direct composition. The difference we produce our ZTM is raw material. We use metal powder as raw material and reduced metal powder into  $ZrO_2+TiO_2$  oxide material. So the material is metallized. It has following advantage than ceramic  $ZrO_2$  and  $ZrO_2+TiO_2$ :

Refractive index steady and melting better. Index is higher. Conductivity is better as we change structure to raise material activation. So the laser damage value is better than ceramic  $ZrO_2$  and  $ZrO_2+TiO_2$ . Adhesion is better than single  $ZrO_2$  and  $ZrOx$ . It is easy to match for lower index materials such as  $MgF_2$  and  $SiO_2$  to form a dense , hard and high performance optical film.

**Application:** Durable Multi-layers A.R coating with lower index  $SiO_2$  and  $MgF_2$ .

