Knight Optical supplies Barium Fluoride (BaF$_2$) Scintillator for High Energy Particle Detection. BaF$_2$ is a very fast scintillator that is used for the detection of X-rays, gamma rays, and other high energy particles.

Unlike other scintillator crystals, it does not glow under ultra-violet light.

A major problem with this material is that it is corroded by water at 500°C, but in a dry atmosphere it can be used up to 800°C.

BaF$_2$ can be diamond turned permitting better and lighter VUV, UV, Visible, NIR, MWIR and LWIR systems to be built. The surfaces that can be diamond turned include, spherical, aspherical, and cylindrical.

Typical materials that we can diamond turn for military based diamond turned aspheric optics are: Germanium (Ge), Calcium Fluoride (CaF$_2$), Zinc Sulphide (ZnS), Zinc Selenide (ZnSe), Aluminium (Al), and Barium Fluoride (BaF$_2$).

Contact our multilingual technical sales team and discover how Knight Optical’s high quality Barium Fluoride optics and superior service can improve your instrumentation and supply chain experience. Tel: +44 (0) 1622 859 444