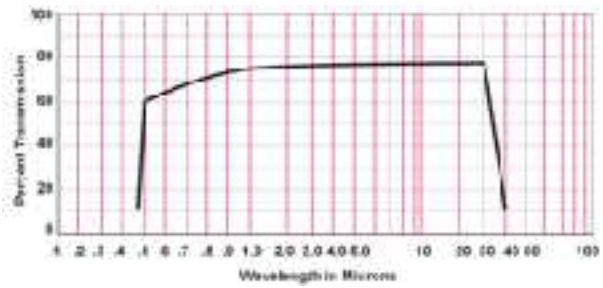
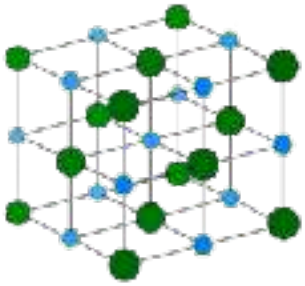
Optical Materials
Silver Bromide (AgBr) Optical Crystals

Silver Bromide (AgBr) is an orange colored optical material commonly used for infrared transmission windows in gas and liquid sample cells used with infrared and FTIR spectrophotometers. It can be used in place of AgCl, KBr, KRS-5 and Cesium Iodide (CsI). AgBr can be used with aqueous samples that would attack CsI and KBr optics.

AgBr has a wide transmission range comparable to KRS-5 but does not exhibit the toxicity of KRS-5. AgBr has a wider transmission range than does AgCl, is harder than AgCl and it is not as sensitive to light as AgCl. When used in an FTIR instrument, the photosensitivity of AgBr is manageable and with some care these windows will have a long service life. The wide transmission range of AgBr, its relative insolubility in water and its lower sensitivity to light exposure makes AgBr an extremely versatile IR window.





Optical Properties- Silver Bromide (AgBr) Optical Crystals

Transmission Range : 400nm-35µm
Refractive Index: 2.0 @ 10.6µm
Reflection Loss: 20% at 10.6µm(2 surfaces)

Physical Properties- Silver Bromide (AgBr) Optical Crystals

Melting Point: 432°C
Structure: Cubic, no cleavage, cold flows

Chemical Properties- Silver Bromide (AgBr) Optical Crystals

Solubility: 12 x 10^{-6} gm/100gm water at 20°C

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