

## DATA SHEET

## BARIUM FLUORIDE

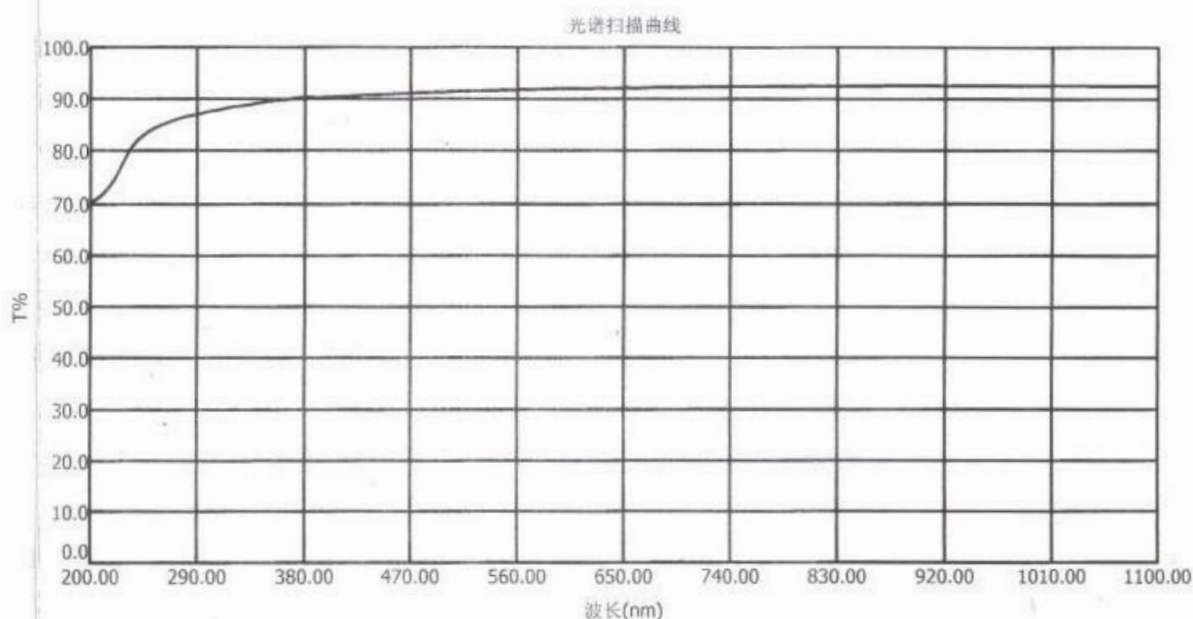
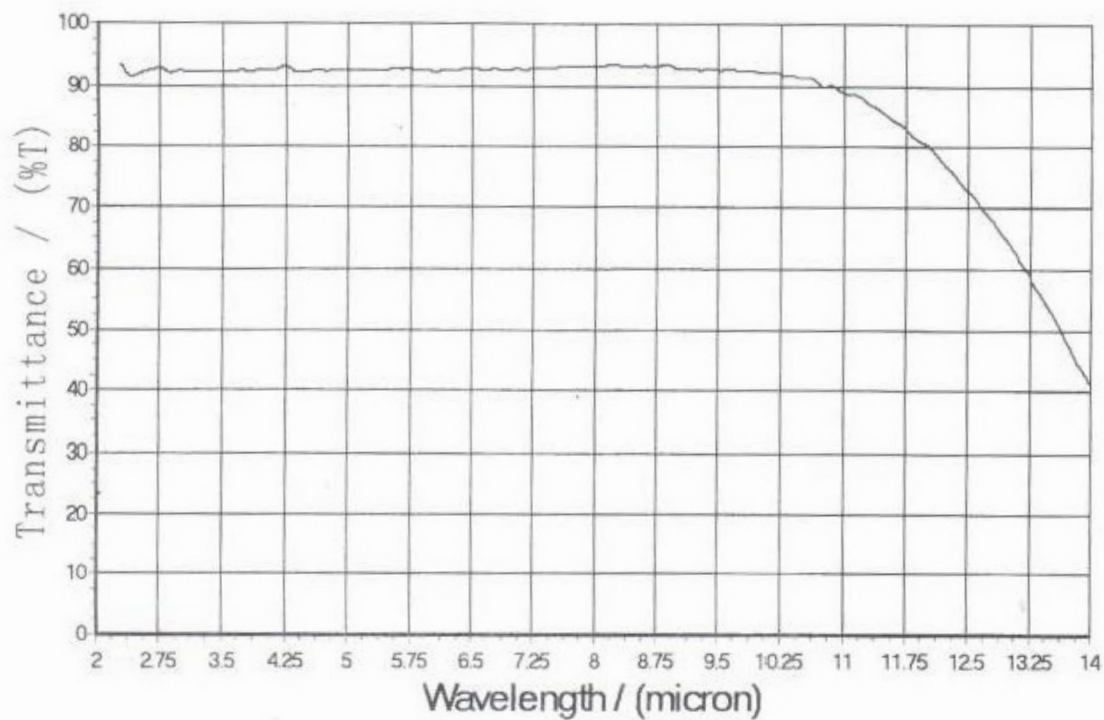
### 1. Material Properties

| Optical Properties          |                                              |
|-----------------------------|----------------------------------------------|
| Transmission Range          | 150 nm to 11 $\mu$ m                         |
| Refractive Index            | 1.4626@2.6um                                 |
| Reflection Loss             | 7.7%@0.6um; 6.0%@4.0um                       |
| Absorption Coefficient      | 47um                                         |
| $dn/dT[K^{-1}]@300K5@0.5um$ | $-1.65 \times 10^{-5}$                       |
| Physical Properties         |                                              |
| Density                     | 4.89 g/cm <sup>3</sup>                       |
| Melting Point               | 1386°C                                       |
| Thermal Conductivity        | 11.72 Wm <sup>-1</sup> K <sup>-1</sup> @13°C |
| Thermal Expansion           | 18.1*10 <sup>-6</sup> /°C (-100°C , +120°C ) |
| Knoop Hardness              | 82 with 500g indenter                        |
| Specific Heat Capacity      | 410 J(Kg.k) @27°C                            |
| Dielectric Constant         | 7.33@f=2MHz                                  |
| Youngs Modulus (E)          | 56.4 Gpa                                     |
| Shear Modulus (G)           | 25.4 Gpa                                     |
| Bulk Modulus (K)            | 268.89 Gpa                                   |
| Elastic Coefficient         | C11=90.4; C12=40.6; C44=25.3                 |
| Apparent Elastic Limit      | 26.89                                        |
| Poisson Ratio               | 0.343                                        |
| Chemical Properties         |                                              |
| Solubility                  | 0.17g/100g@23°C                              |
| Molecular Weight            | 175.3                                        |
| Structure                   | Cubic Crystal                                |
| Cleavage Plane              | (111)                                        |

### 2. Transmission Curve

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## BFW-353W – DRILLED HOLES

