

# TSAG 铽钪铝石榴石 Terbium Scandium Aluminum Garnet

## 简介 Introduction:

TSAG 是下一代光纤激光器的关键隔离器材料，作为一种理想的可见光和红外磁光晶体，具有 Verdet 常数高、热学和力学性能优异等优点。

TSAG is a key isolator material for the next generation of fiber lasers, and as an ideal visible and infrared magnetic crystal, it has the advantages of high Verdet constant, thermal and mechanical performance.



## 主要优点 Main Advantages:

大维尔德常数 (65radT-1m-1 at 1064nm), 比 TGG 高 20% 左右;

低吸收 (< 3000ppm/cm at 1064nm)

高功率应用

低热致双折射

隔离器小型化

Verdet constant 20% higher than TGG (65radT-1m-1 at 1064nm)

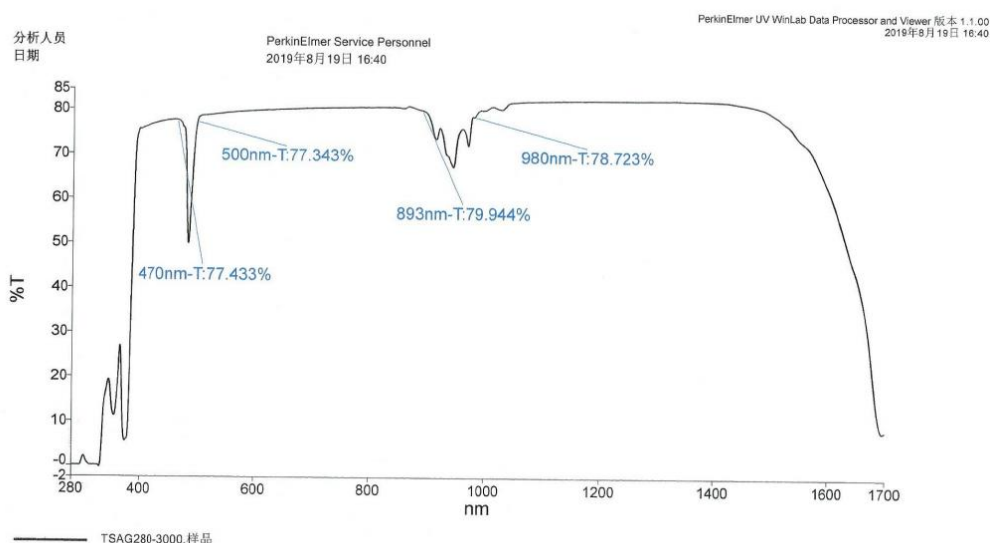
Low Absorption (< 3000ppm/cm at 1064nm)

High power compliant

Low thermally-induced birefringence

Make isolator more compact and smaller

## 透射曲线 Transmission Curve:



**材料特性 Material Properties:**

|                          |   |
|--------------------------|---|
| 化学式 Chemical Formula     | Tb <sub>3</sub> Sc <sub>2</sub> Al <sub>3</sub> O <sub>12</sub> |
| 晶体结构 Crystal Structure   | Cubic ,Space group Ia3d   |
| 晶格参数 Lattice constant    | a=12.3Å   |
| 生长方法 Growth Method       | Czochralski   |
| 密度 Density               | 5.91g/cm <sup>3</sup>   |
| 熔点 Melting point         | 1970±10°C   |
| 透射率范围 Transmission Range | 400-1600nm  |
| 维尔德常数 Verdet (red/M/T)   | 218/152/65@532nm/633nm/1064nm                                   |

**科瑞思创提供 Crystro offers:**

|                            |              |
|----------------------------|--------------|
| 定向精度 Orientation           | (111)±15'    |
| 波前畸变 Wave Front Distortion | < λ/8@633nm  |
| 消光比 Extinction Ratio       | > 30dB       |
| 直径公差 Diameter Tolerance    | +0mm/-0.05mm |
| 长度公差 Diameter Tolerance    | ±0.2mm       |
| 倒角 Chamfer                 | < 0.1mm@45°  |
| 平面度 Flatness               | < λ/10@633nm |
| 平行度 Parallelism            | < 30"        |
| 侧垂 Perpendicularity        | < 15'        |
| 光洁度 Surface Quality        | 10/5         |
| 镀膜 AR Coating              | <0.2%@1064nm |

备注：以上参数为参考数据，具体产品技术要求请联系销售人员确认。

Note: Above parameters for reference only, please contact our sales Rep. for your specific requirement.