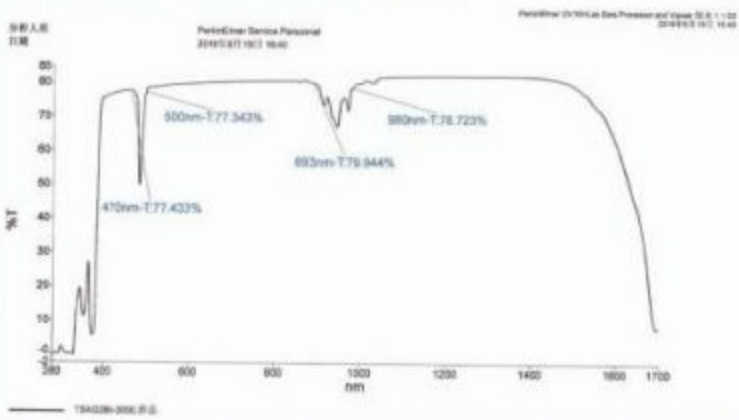
铽钪铝石榴石TSAG

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.

透射曲线Transmission Curve:



材料特性 Material Properties:

透射率范围Transmission range	400-1600nm
晶体结构Crystal Structure	Cubic ,Space group Ia3d
化学式Chemical Formular	Tb3Sc2Al3012
晶格参数Lattice constant	a=12.3
生长法Growth Method	Czochralski
密度Density	5.91g/cm³
熔点Melting Point	1970℃±10℃
维尔德常数Verdet(rad/M/T)	218/152/65@532nm/633nm/1064nm

主要优点：

- 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

Main Advantages:

- Verdet constant 20% higher than TGG(48radT-1m-1 at 1064nm)
- Low Absorption (<3000ppm/cm at 1064nm)
- High power compliant
- Low thermally-induced birefringence
- Make isolator more compact and smaller

科瑞思创提供Crystro offers:

定向精度Orientation	±15′
波前畸变Wavefront Distortion	<λ/8
消光比Extinction Ratio	>30dB
直径公差Diameter Tolerance	+0.00mm/-0.05mm
长度公差Length Tolerance	+0.2mm/-0.2mm
倒角Chamfer	<0.1mm @ 45°
平面度Flatness	<λ/10 @ 633nm
平行度Parallelism	<3′
垂直度Perpendicularity	<5′
光洁度Surface Quality	10/5
镀膜ARcoating	<0.2% @ 1064nm