

## Terbium Gallium Garnet (TGG)

### Introduction:

TGG single crystal is an excellent magneto-optical material for making Faraday rotator and optical isolator, with a suitable wavelength from 400nm to 1100nm, excluding 470nm-500nm.

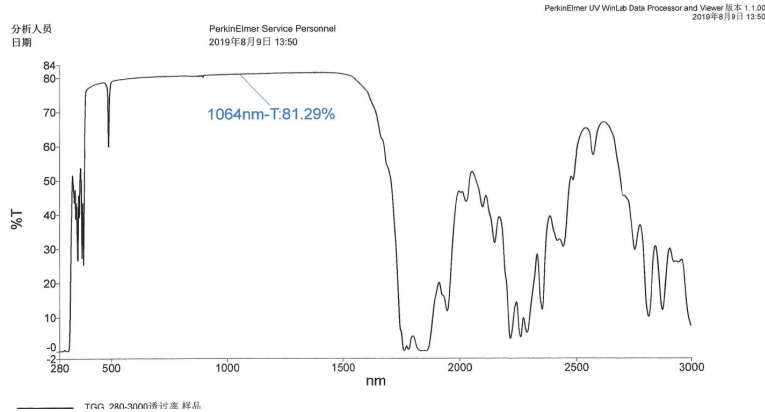
### Main Advantages:

- ✧ Large Verdet Constant (40 Rad T<sup>-1</sup> m<sup>-1</sup>)
- ✧ Low optical loss (<0.1%/cm)
- ✧ High thermal conductivity (7.4W m<sup>-1</sup>K<sup>-1</sup>).
- ✧ High laser damage threshold (>1GW/cm<sup>2</sup>).

### Typical application:

- ✧ Faraday rotator
- ✧ Optical isolator

### Transmission Curve:



### Material Properties:

Chemical Formula	Tb <sub>3</sub> Ga <sub>5</sub> O <sub>12</sub>
Lattice Constant	a=12.355Å
Growth Method	Czochralski
Density	7.13g/cm <sup>3</sup>
Hardness	8.0
Melting Point	1725 °C
Refractive Index	1.954 @ 1064nm

### Crystro offers:


Orientation	[111] ±15'
Wave Front Distortion	<λ/8
Extinction Ratio	>35dB
Diameter Tolerance	+0.00mm/-0.05mm
Length Tolerance	+0.2mm/-0.2mm
Chamfer	0.10mm@45°
Flatness	<λ/10 @ 633nm
Parallelism	< 30"
Perpendicularity	< 5'
Surface Quality (S/D)	10-5
Coating	AR, R<0.2%
Dimensions	Max Φ101.6 mm (4'inch)

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

Anhui Crystro Crystal Materials Co., Ltd.

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