GSGG crystals

GGG/GSGG/NGG Garnets are used for liquid epitaxy.GSGG subatrates is dedicated substrates for magneto-optical film.In the optical communication devices,require a lot of using 1.3u and 1.5u optical isolator,it's core component is YIG or BIG film been placed in a magnetic field.
GSGG substrate is excellent for growing bismuth-substituted iron garnet epitaxial films,is good material for YIG,BiYIG,GdBIG.
It's good physical and mechanical properties and chemical stability.

Applications:
- YIG,BIG epitaxy film;
- Microwave devices;
- Substitute GGG

GSGG crystals

Properties:	
Composition	(Gd2.6Ca0.4)(Ga4.1Mg0.25Zr0.65)O12
Crystal Structure	Cubic: a =12.480 Å ,
Molecular wDielectric constanteight	968,096
Melt Point	~1730 oC
Density	~ 7.09 g/cm3
Hardness	~ 7.5 (mohns)
Refractive index	1.95
Dielectric constant	30
Dielectric loss tangent (10 GHz)	ca. 3.0 * 10_4
Crystal growth method	Czochralski
Crystal growth direction	<111>

Technical Parameters	
Orientation	<111> <100> within ±15 arc min
Wave Front Distortion	<1/4 wave@632
Diameter Tolerance	±0.05mm
Length Tolerance	±0.2mm
Chamfer	0.10mm@45°
Flatness	<1/10 wave at 633nm
Parallelism	< 30 arc Seconds
Perpendicularity	< 15 arc min
Surface Quality	10/5 Scratch/Dig
Clear Apereture	>90%
Large Dimensions of Crystals	2.8-76 mm in diameter