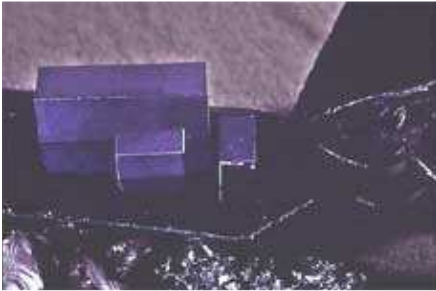


**ZGP Single Crystals**



Chemical Formula	ZnGeP <sub>2</sub>
Crystal Symmetry	tetragonal
Optical Symmetry	uniaxial positive
Class	$\bar{4}2m$

Inrad grows ZGP (Zinc Germanium Phosphide) in house, therefore can fabricate and polish various crystal sizes and orientations.

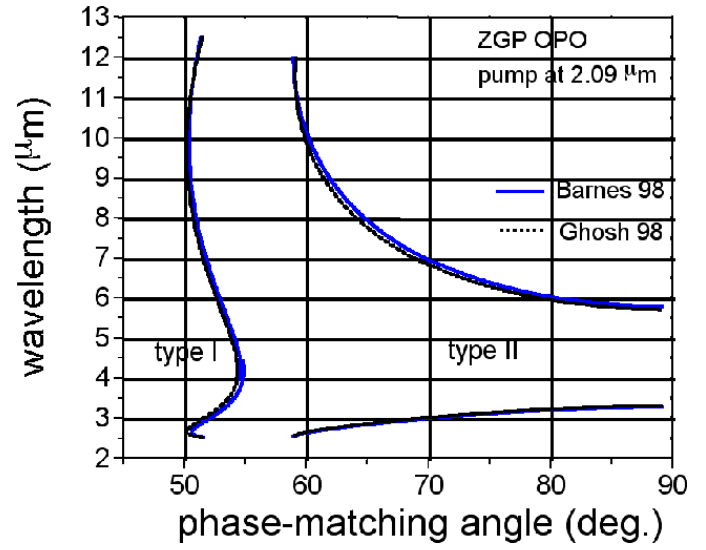
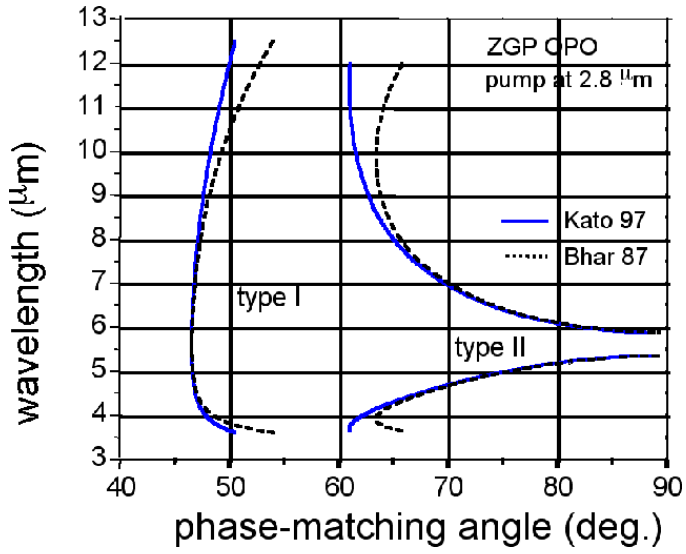
In order to simplify manufacturing, stocking, and ordering, a number of standard sizes have been defined, for the most common orientation. Please send a Request For Quotation to us with your specific needs.

Different orientations, crystallographically speaking, refer to the angles between the beam propagation direction and the crystallographic direction of the optic axis.

The standard orientation shown here is Type I, meaning that the polarization directions of the two longest wavelengths in the mixing process are in the same direction; the shortest wavelength in the mixing process has an orthogonal polarization direction.

<b>ZGP Single Crystals — Standard Orientations</b>			
<b>Type I Angle, <math>\theta</math></b>	<b>Operation</b>	<b>Size</b>	<b>Coating Description</b>
"54°"	OPO with 2.09 $\mu\text{m}$ pump	6 x 8 x 15 mm	AR 2.09 $\mu\text{m}$ / 3.5 $\mu\text{m}$ – 5 $\mu\text{m}$
		6 x 8 x 20 mm	
		6 x 8 x 25 mm	
		6 x 12 x 12 mm	
		6 x 12 x 15 mm	
		6 x 12 x 20 mm	
		6 x 12 x 25 mm	

Calculated tuning curves for a Type I ZGP OPO are shown below, based on the index data of Barnes and of Ghosh. Curves for pumps of both 2.05  $\mu\text{m}$  and 2.09  $\mu\text{m}$  are shown



Barnes, J. Opt. Soc. Am. B 15(1) 232 (1998).  
Ghosh, Applied Optics 37(7) 1205 (1998).