



XTP Frequency Converters and **Wave Plates**

The XTP line of holders offers large aperture, extremely thin KDP or KD*P plates and mounts suitable for harmonic generation and difference frequency mixing with ultrafast pulse lasers.

Very thin crystals minimize the effects of group velocity mismatch and group velocity dispersion in femtosecond lasers. KDP or KD*P offer the advantages of being available in very large apertures with high quality and high damage threshold. Large beam diameters reduce the likelihood of laser damage due to excessive intensity.

Gooch and Housego's precision manufacturing capability produces crystals with aspect ratios as large as 200:1 and low wavefront distortion.

Complementing our ultra-thin crystal fabrication expertise is our capability to provide the world's largest aperture KDP/KD*P harmonic generators and wave plates, which have been fabricated with apertures as large as 420 mm x 420 mm. Transmitted wavefront error for these largeaperture devices is typically in the range of $\lambda/5$ or better at 633 nm. Both the harmonic generators and wave plates are available with SolGel antireflection (AR) coatings.

Key Features:

- Thin crystals offer short optical paths
- Large apertures to 300 mm diameter
- Low wavefront distortion
- SolGel AR coatings
- Anodized aluminium housings
- Custom configurations available

Applications:

- Ultrafast laser research
- Large aperture wave plates

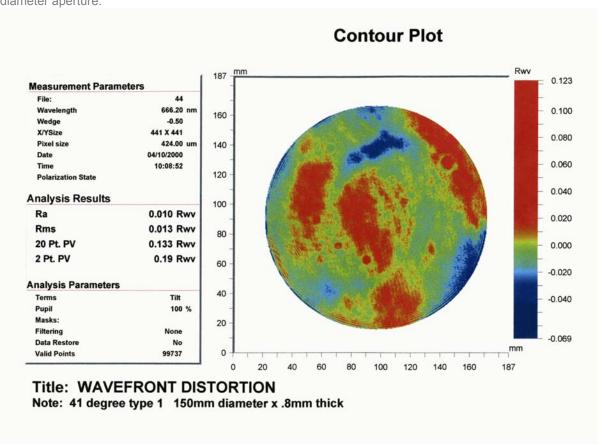
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Optical Specifications

Example: Actual contour plot of the wavefront distortion of a 0.8 mm thick, KDP crystal with a150 mm diameter aperture.



Ordering Codes

SIZES AVAILABLE: Although many crystal specifications are custom tailored to meet individual applications, housings with standard apertures and outside diameters may be selected.

| Model Number | Aperture Diameter | Outside Diameter |
|--------------|-------------------|------------------|
| XTP 65 | 65 mm | 101 mm |
| XTP 100 | 100 mm | 152 mm |
| XTP 125 | 125 mm | 186 mm |
| XTP 160 | 160 mm | 228 mm |
| XTP 200 | 200 mm | 254 mm |
| XTP 300 | 300 mm | 356 mm |

Sales Europe Graham Catley gcatley@goochandhousego.com Tel: +44 1803 407893 Sales North America Brent Gross bgross@goochandhousego.com Tel: +1 216 486 6100 Sales Asia-Pacific Martin Cheng mcheng@goochandhousego.com Tel: +852 63486199