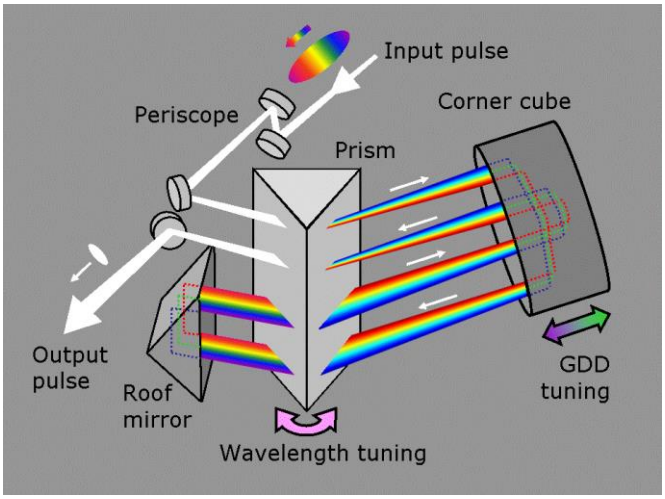
BOA™ PULSE COMPRESSOR SPECIFICATIONS (IR WAVELENGTHS)

Pulse compressor model:	BOA-800	BOA-1050	BOA-1300	BOA-1550-CUS-TOM
Wavelength range:	700 - 1100 nm	900 - 1200 nm	1000 - 1400 nm	1400 - 1700 nm
Max neg. GDD @ center wavelength[1]:	-38,000 fs^2	-14,000 fs^2	-13,000 fs^2	-20,000 fs^2
Transmission[2] @ shortest wavelength: **@ center wavelength:**	> 80% > 70%	> 80% > 70%	> 80% > 70%	> 80% > 70%
Max bandwidth @ maximum GDD[3]: **@ half-maximum GDD :**	40 nm 70 nm	110 nm 190 nm	150 nm 240 nm	120 nm 200 nm
Maximum peak power:	500 MW			
Total additional beam path:	< 1.5 m			
Pulse repetition rate:	Any			
Angular dispersion ($d\theta/d\lambda$) added:	0			
Pulse-front tilt (dt/dx) added:	0			
Spatial chirp ($dx/d\lambda$) added:	0			
1D beam magnification:	1			
Output/input beam collinearity:	< 10 mrad			
Required input polarization:	Horizontal			
Polarization rotation:	<0.1°			
Required input-beam diameter:	1 – 4 mm (collimated)			
Input-beam lateral-displ. tolerance:	1 mm			
Number of internal alignment knobs:	Zero			
Time to set up:	~ 10 minutes			
Dimensions (L x W x H):	46 cm x 13.5 cm x 16 cm			
Weight:	~ 10 kg			

1. The device center wavelength (in nanometers) is the number following the "BOA-" in the device model name. Wavelength-dependent performance for the full operation range is provided in the following pages.
2. The indicated numbers are typical, experimentally obtainable values, not theoretical estimates. However, the overall transmission depends on polarization purity and beam divergence.
3. As with all dispersive pulse compressors, the maximum bandwidth is limited by beam clipping on the second pass through the prism and so depends on the prism-corner-cube separation (and hence the device's maximum negative GDD). A unique advantage of the BOA single-prism/corner-cube design, which tunes GDD by varying this separation, however, is that, if less than the full negative GDD is needed, the beam path will be shorter, and, as a result, the compressor can accommodate a pulse with a larger bandwidth.

ADDITIONAL NOTES

- The added angular dispersion, pulse-front tilt, and spatial chirp are fundamentally identically zero and were all immeasurable in our experiments.
- Alignment of a beam into the pulse compressor is achieved using a simple trick: back-reflection off a removable glass window (which is provided).
- The pulse compressor itself is auto-aligning, so no alignment knobs are required for the internal components.



Layout for the BOA single-prism pulse compressor

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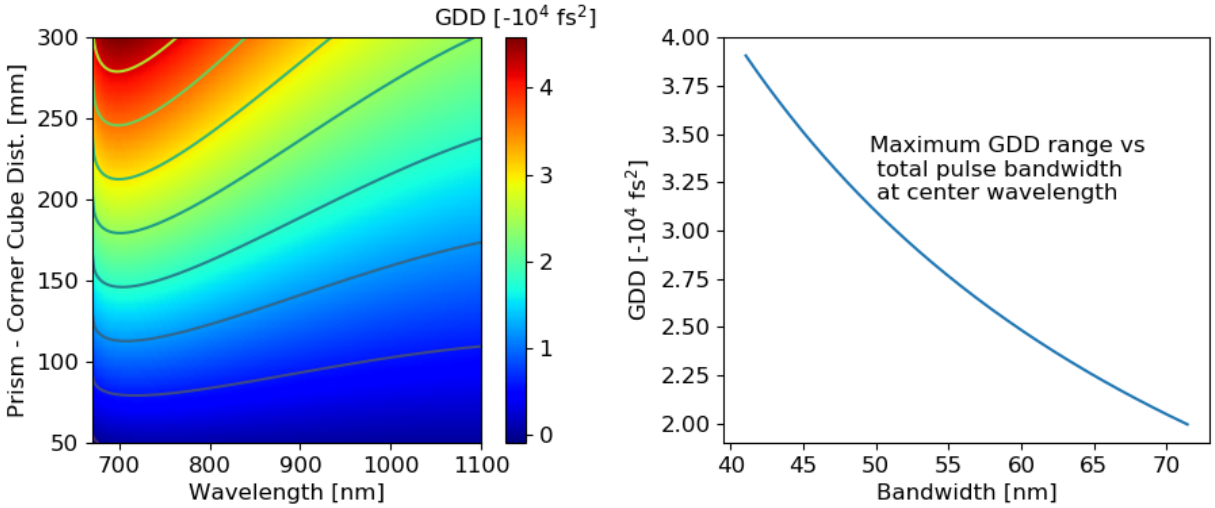
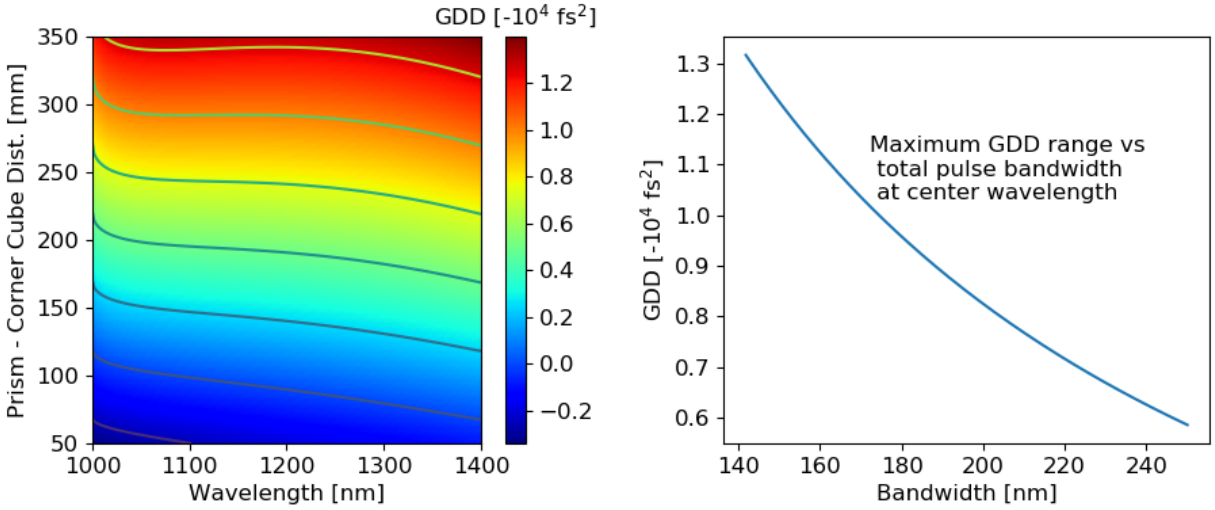
Single Prism Pulse Compressor, BOA-800



Single Prism Pulse Compressor, BOA-1300



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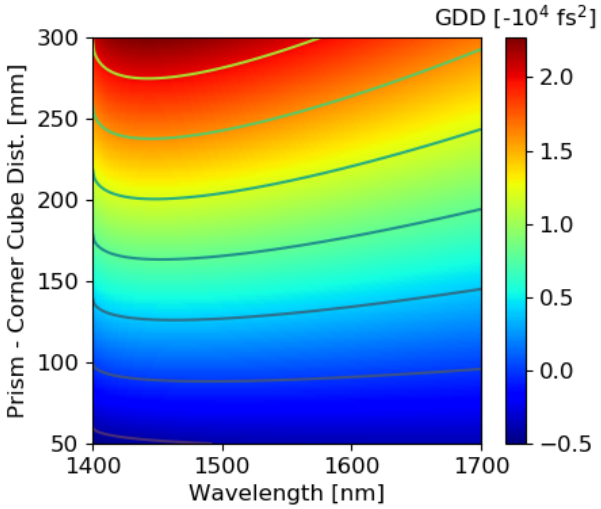
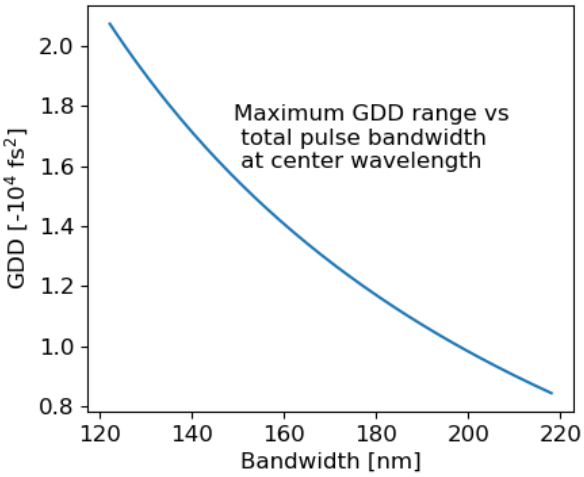
Single Prism Pulse Compressor, BOA-1550





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