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PULSE COMPRESSOR AND PEAK-FIELD BOOSTER

PRELIMINARY

Features

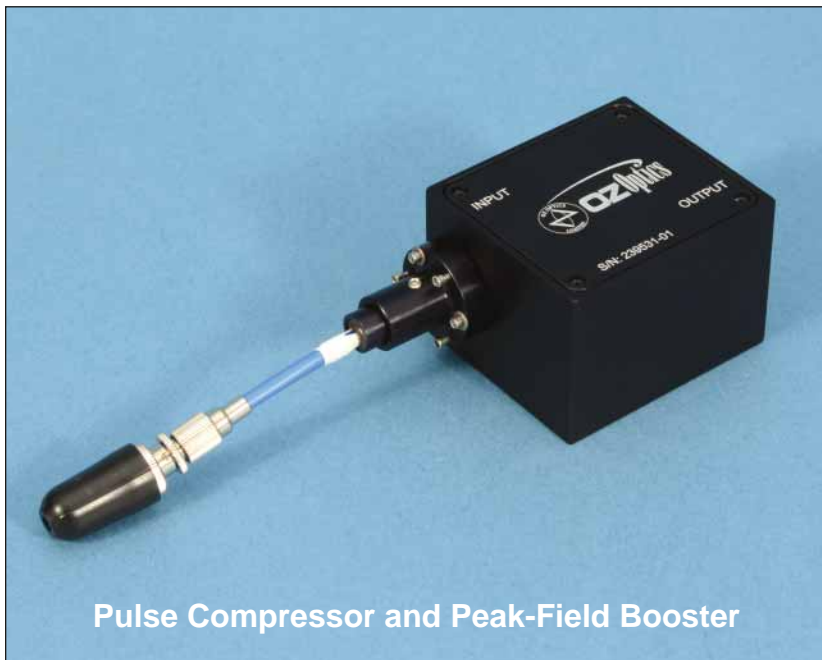
- Higher output peak field
- Easy installation and alignment
- Compact and light weight platform
- Rugged and fiber-based design
- Tunable pulse-width compression
- Tunable spectral bandwidth expansion

Applications

- THz Generation and Detection
- Optical Microscopy
- Nonlinear Optics

Product Description

This compact device utilizes nonlinear effects from an optical fiber to surpass peak electric field limitations from an ultrafast optical source. After fixing the device to the output of the source, only minor adjustments are needed to increase the peak electric field by a factor of more than two. The pulse exiting this device contains more frequency content than the optical source and has a shorter pulse duration.



Pulse Compressor and Peak-Field Booster

Performance Specifications¹

Part Number: PWC-1030-6/125-P-60-3A-3-0.07				
Parameter	Max.	Typical	Min.	Unit
Wavelength	1050	1035	1020	nm
Input Peak Power ^{1,2}	43.8	41.7	39.6	kW
Output Peak Power ^{1,2}	105.5	100.5	95.4	kW
Pulse-width Compression Factor	>3			
Physical Dimensions	Width x Depth x Height	5 x 4.5 x 3.5 cm		
	Weight	< 0.3 kg		

Note:

¹ Calculated using measurements from figure 1.

² Measured at ambient temperature.

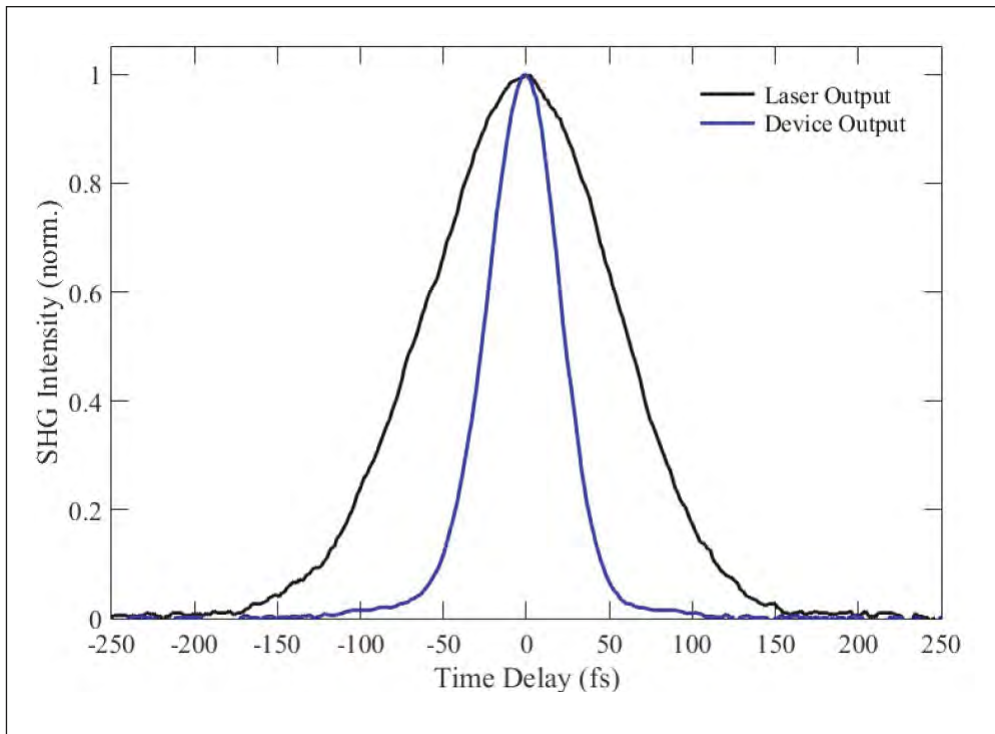


Figure 1. Autocorrelation traces of the ultrashort pulse before and after passing through the device. Measurements were acquired using a second harmonic generation (SHG) intensity autocorrelator utilizing a BBO crystal.

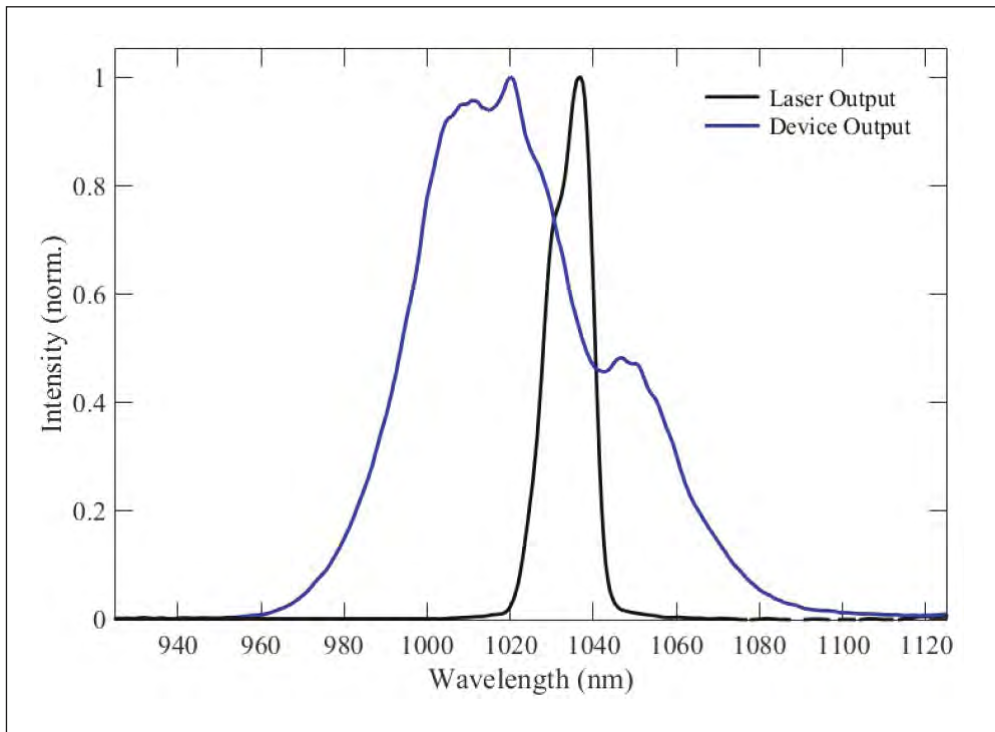


Figure 2. Spectra of the ultrashort pulse before and after passing through the device.

Operating and Storage Conditions

Parameter	Min.	Max.
Operating Temperature	15°C	25°C
Operating Relative Humidity (% RH)	5	60
Storage Temperature	-40°C	40°C
Storage Relative Humidity (% RH)	0	90

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