

# TeraXion

An indie Semiconductor Company

## PowerSpectrum™

# CM-V Chirped module with VBG compressor



**The PowerSpectrum™ CM-V is the most compact and robust ultrafast pulse stretcher+compressor pair on the market.** Every stretcher+compressor unit is paired in-house and features a TeraXion TPSR-V that has been individually designed and tuned to a specific volume Bragg grating (VBG) compressor. This attention to detail results in a superior phase control and performance that are unmatched in the industry.

TeraXion developed the CM-V to ensure the highest possible performance for ultrafast lasers using VBG pulse compression.

Our exclusive FBG dispersion management expertise facilitates accurate phase control, which enables pedestal-free fs pulses.

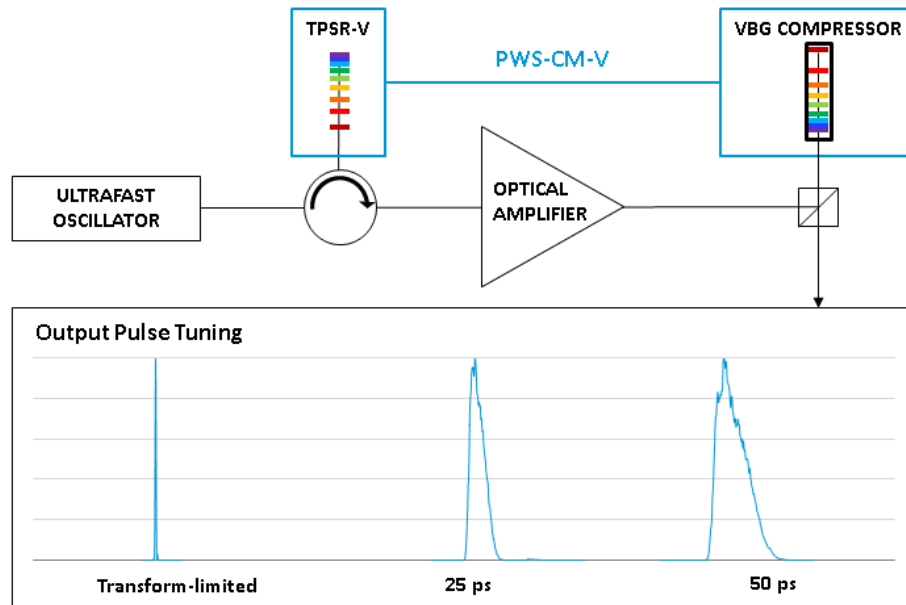
In-house pairing of each TPSR-V to a specific volume Bragg grating (VBG) compressor minimizes phase errors for optimal pulse compressibility.

Our flexible and user-friendly software make it easy to integrate the CM-V into any laser design.

## Top 5 Features

- **Time-saving:** TeraXion has the facilities, skills and resources to pair TPSR-V and VBG units far more efficiently than most end-users.
- **Robust:** The compact, all-fiber construction remains operational in changing environmental conditions.
- **Compact:** The PowerSpectrum™ CM-V is the most compact pulse stretcher+compressor pair in the industry.
- **Cost-effective:** The composite design of the CM-V, combined with full electronic control, results in shorter cycle times, increased throughput, and lower operating costs.
- **Integrated:** Software integration between the CM-V and the laser system enables dynamic and precise pulse control and virtually eliminates hardware alignment and servicing.

### Chirped-Pulse Amplification with a VBG Compressor



### General Specifications

Parameters		Units
Center wavelength band <sup>(1)</sup>	1	μm
Minimum input pulse duration	≥150	fs
FBG spectral shape <sup>(2)</sup>	Customizable	
Total stretching window	≤500	ps
VBG compressor matching	GD function and phase error matching	
Pulse tuning	From transform-limited up to 50	ps
Dispersion tuning	D <sub>2</sub> , D <sub>3</sub> and D <sub>4</sub>	
Fiber type	PM	
Module dimensions	14 x 22 x 130	mm
Control	USB/I <sup>2</sup> C	
VBG Diffraction efficiency	85	%
VBG Dimensions	5 x 5 x 50	mm

(1) Other wavelengths available upon request

(2) Amplifier gain bandwidth enhancement available upon request

### Ordering information

For orders, questions, specific requirements or to learn more about TeraXion's products, contact us at [info@teraxion.com](mailto:info@teraxion.com)

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