# SHBC

## Second Harmonic Bandwidth Compressor

### FEATURES

- 515 nm output
- < 10 $cm^{-1}$ spectral bandwidth
- 2 – 4 ps pulse duration
- > 30% conversion efficiency
- Used to pump ORPHEUS-PS
- Small footprint

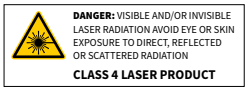

SHBC is a second harmonic bandwidth compressor dedicated to the generation of narrow-bandwidth picosecond pulses from a broad-bandwidth output of PHAROS and CARBIDE femtosecond lasers.

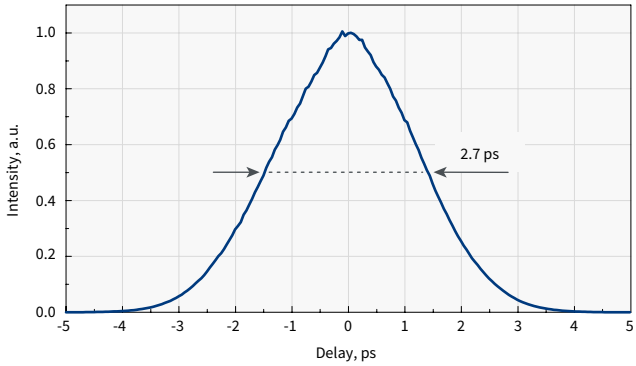
SHBC enables the creation of versatile optical setups which use fixed-wavelength or tunable narrow-bandwidth picosecond pulses in combination with tunable-wavelength broadband femtosecond pulses. In particular, such setups are of interest in sum-frequency generation (SFG) spectroscopy.

### SPECIFICATIONS

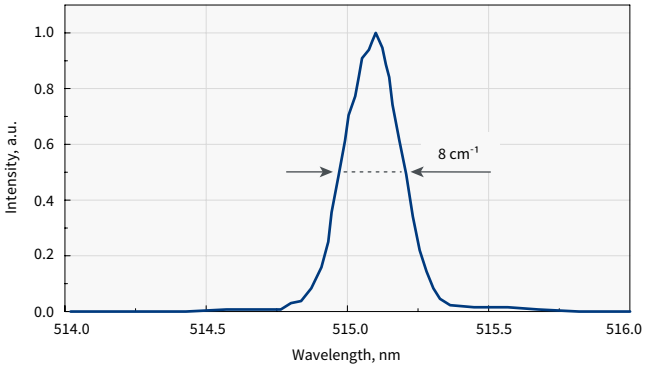
| Model | **SHBC** |
|---|---|
| **OUTPUT CHARACTERISTICS** | |
| **Output wavelength** [1] | 515 nm ± 5 nm |
| **Conversion efficiency** | > 30% |
| **Spectral bandwidth** [2] | < 10 $cm^{-1}$ |
| **Pulse duration** [3] | 2 – 4 ps |
| **PUMP LASER REQUIREMENTS** | |
| **Pump source** | PHAROS or CARBIDE with uncompressed output option |
| **Pump pulse energy** | 40 µJ – 4 mJ |
| **Maximum pump power** | 40 W |
| **DIMENSIONS** | |
| **Housing (L × W × H)** | 426 × 351 × 119 mm |
| **Recommended area for fixing (L × W × H)** | 450 × 400 × 150 mm |

[1] *Depends on pump laser model.*
[2] *< 2 $cm^{-1}$ model available; contact sales@lightcon.com.*
[3] *SHBC can be adjusted to shorter pulse durations at the expense of narrow spectral bandwidth.*






Typical pulse duration of SHBC output




Typical spectrum of SHBC output

## DRAWINGS