SHBC

Second Harmonic Bandwidth Compressor

FEATURES

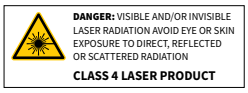
- 515 nm picosecond pulses from femtosecond pump
- < 10 cm^{-1} spectral bandwidth
- 2 – 4 ps pulse duration
- > 30% conversion efficiency
- Used to pump ORPHEUS-PS
- Compact footprint

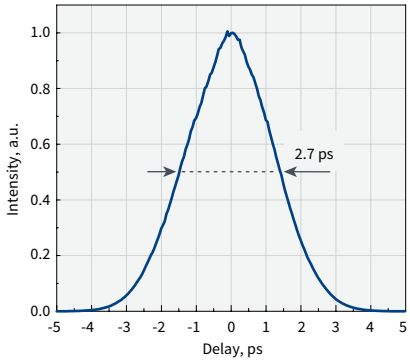
SHBC is a second harmonic bandwidth compressor dedicated to the generation of narrow-bandwidth picosecond pulses from a broad-bandwidth output of PHAROS and CARBIDE femtosecond lasers.
SHBC enables the creation of versatile optical setups which use fixed-wavelength or tunable (in combination with ORPHEUS-PS) 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 and femtosecond stimulated Raman spectroscopy (FSRS).

SPECIFICATIONS

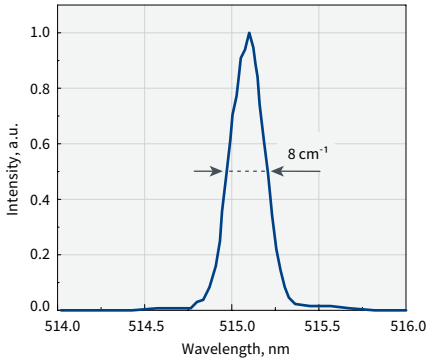
Model	SHBC
OUTPUT CHARACTERISTICS	
Output wavelength [1]	515 nm ± 5 nm
Conversion efficiency	> 30%
Spectral bandwidth [2]	< 10 cm^{-1}
Pulse duration [3]	2 – 4 ps
PUMP LASER REQUIREMENTS	
Pump source	PHAROS or CARBIDE with uncompressed output option
Pump pulse energy	40 µJ – 4 mJ
Maximum pump power	40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

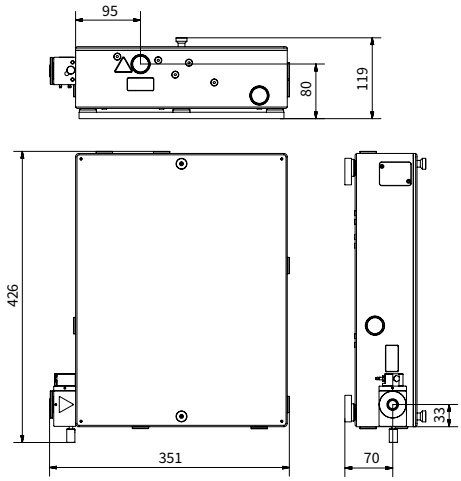
[1] *Depends on pump laser model.*
[2] *< 2 cm^{-1} model available; contact sales@lightcon.com.*
[3] *SHBC can be adjusted to shorter pulse durations at the expense of narrow spectral bandwidth.*





Typical pulse duration of SHBC output



Typical spectrum of SHBC output

DRAWINGS