

# QuickShape IR

POWERFUL MID-IR PULSE SHAPER

**QuickShape IR** is a powerful mid-IR pulse shaper that has been designed and engineered for flexibility and ease of use.

Shot-to-shot operation at up to **100 kHz** for high signal-to-noise experiments with the latest high-repetition-rate lasers.

## APPLICATIONS

- Time-domain 2D IR
- Frequency-domain 2D IR
- Transient 2D IR
- Time-domain SFG
- Heterodyned 2D SFG
- Coherent control
- Mid-IR transient absorption spectra without an expensive detector
- Rapid-scan optical delay line
- High-repetition-rate chopper

## CAPABILITIES & FEATURES

- Shot-to-shot scanning
- Easy-to-use software with advanced features
- Phase cycling & rotating frame
- Create exponential, reverse-exponential pulses, Gaussian and double pulses
- GVD and TOD correction
- Generate your own custom pulse shapes
- Example LabView™ code & control VIs

“the ultimate multi-tool  
for ultrafast mid-IR”

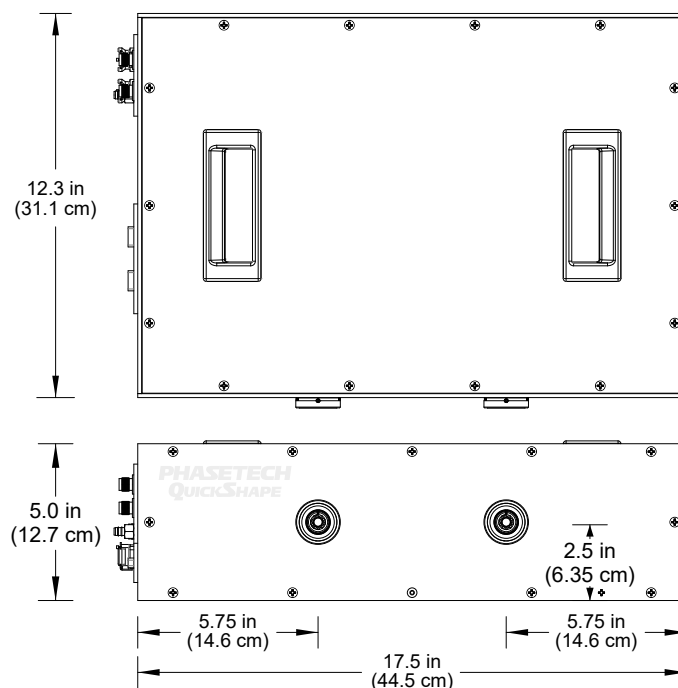
## SPECIFICATIONS

Standard AR Coating	2.6 - 10 $\mu\text{m}$ (1000 - 3850 1/cm)
(other wavelength ranges are available upon request)	
Spectral Window <sup>1</sup>	> 1.5 $\mu\text{m}$ at 5.5 $\mu\text{m}$
Spectral Resolution <sup>1</sup>	< 5 1/cm at 5.5 $\mu\text{m}$
Effective Pixels <sup>2</sup>	> 180
Source Laser Repetition Rate	$\leq$ 100 kHz
Maximum Double Pulse Delay <sup>3</sup>	> 5 ps <sup>1</sup> at 5.5 $\mu\text{m}$
Input Beam Size (1/e <sup>2</sup> )	7 mm, collimated
Input Polarization	Linear, Horizontal
Throughput Efficiency	> 25% @ 5.0 $\mu\text{m}$
Approximate Size	12.3 x 17.5 x 5 in (31.1 x 44.5 x 12.7 cm)

<sup>1</sup> Specification is based on our standard gratings and an input diameter of 7 mm. Other gratings are available upon request or can be provided by the user.

<sup>2</sup> See our website for more about how the effective pixel size is measured.

<sup>3</sup> Calculated based on effective pixel size with standard gratings.



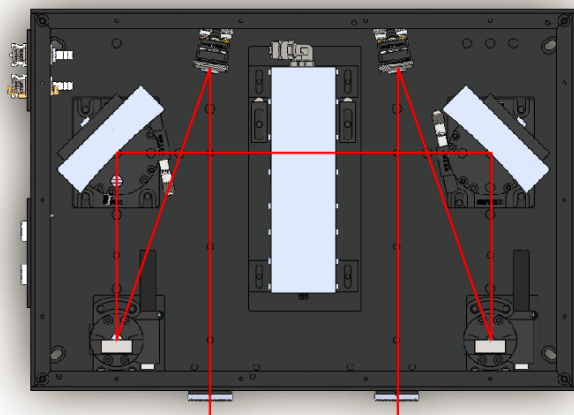
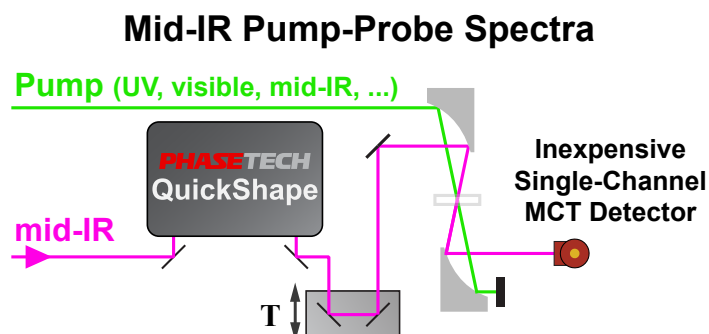
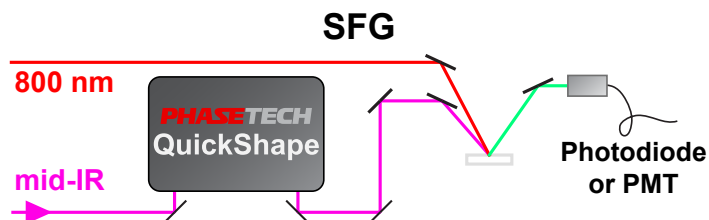
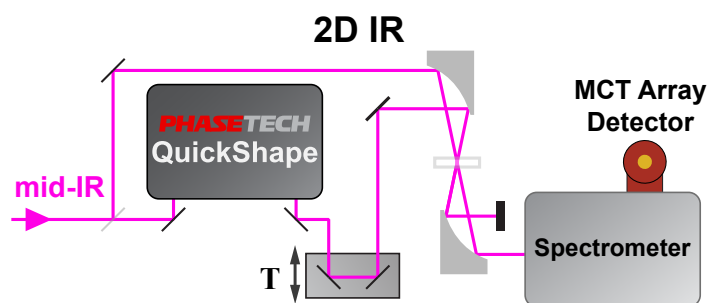
# PHASETECH QuickShape IR

## ADDITIONAL INFORMATION

### INCLUDES

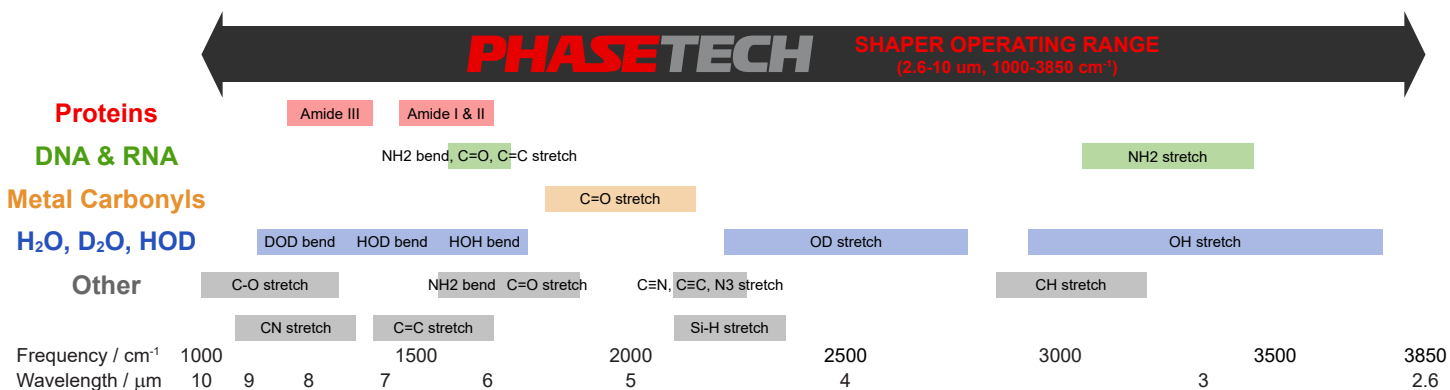
- Advanced Arbitrary Waveform Generator - load & cycle through over 175,000 pre-defined pulse-shape
- Detailed User Manual
- LabView™ Control VIs
- QuickControl Software Package
- Purging Enclosure
- Control Computer

### EXAMPLE LAYOUTS



New 4<sup>th</sup> generation design! Simple layout - easy to align!

Motorized rotation stages for wavelength tuning!



The QuickShape operates at wavelengths covering the most-studied vibrations of proteins, DNA & RNA, metal carbonyls and water. Other wavelength ranges are also available by request.

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