

# 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.

## 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”

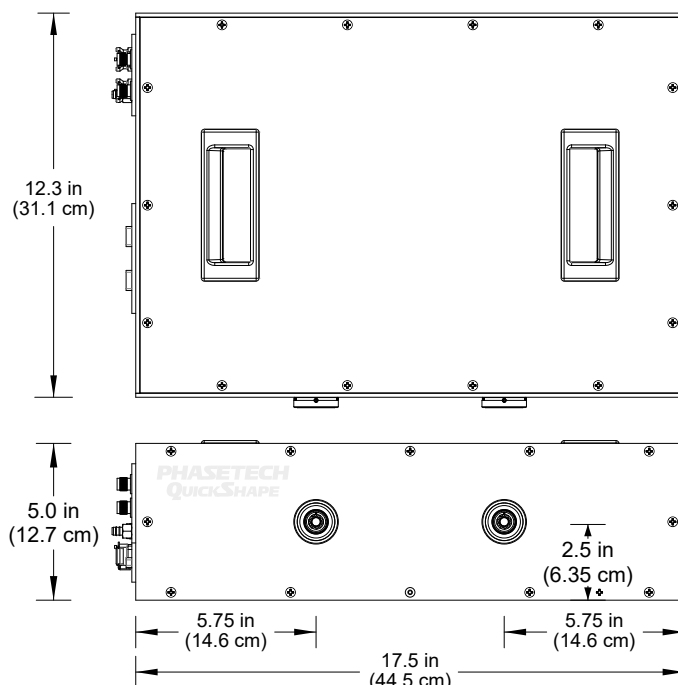
## SPECIFICATIONS

|  |   |
|--|---|
| Standard AR Coating                                  | 3.0 - 12.0 $\mu\text{m}$<br>(833 - 3333 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<br>(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.

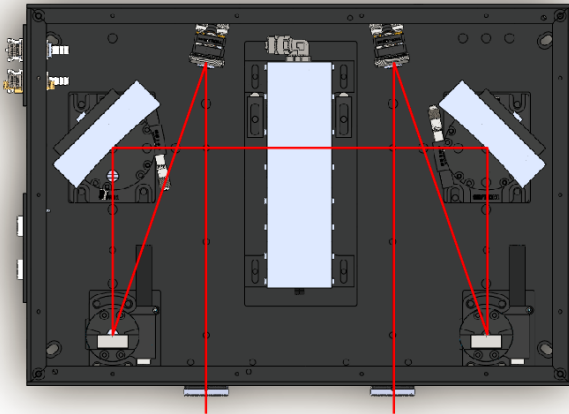


# PHASETECH QuickShape IR

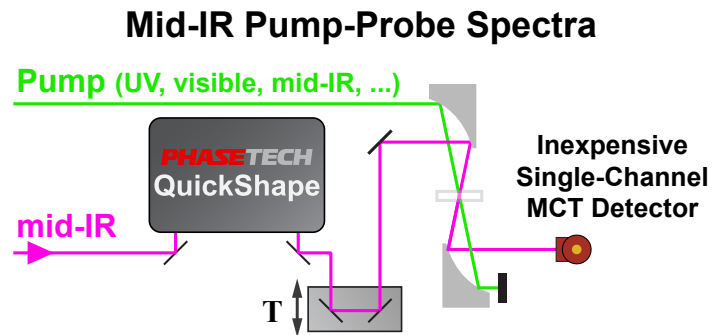
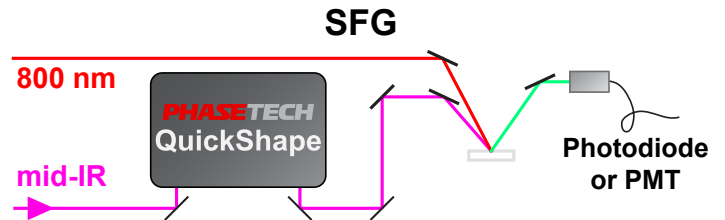
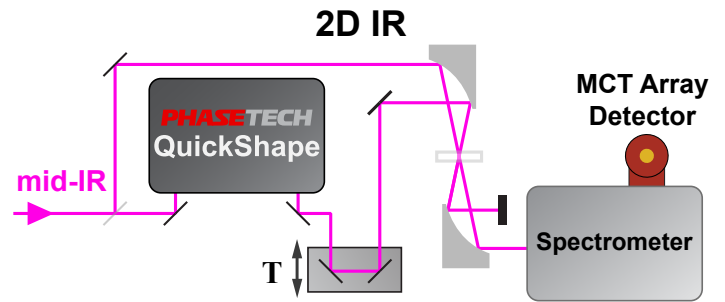
## ADDITIONAL INFORMATION

### INCLUDES

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

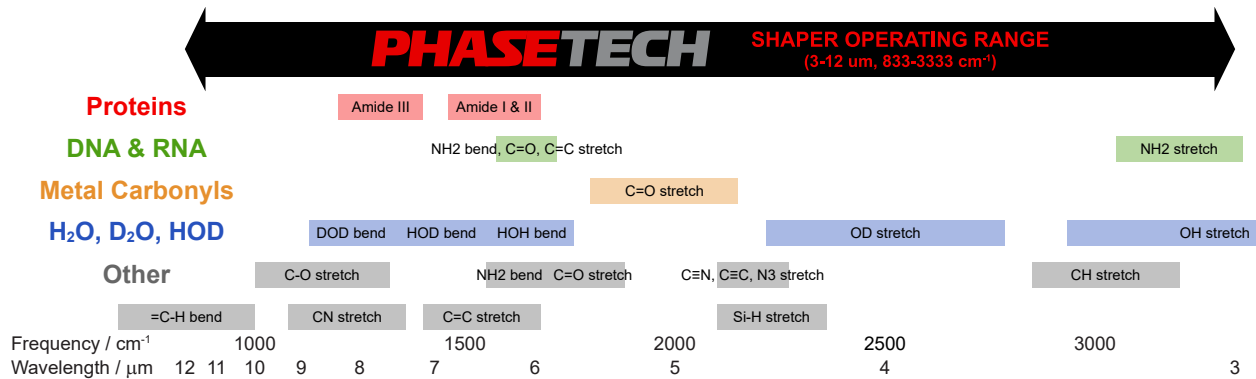


### EXAMPLE LAYOUTS



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. Extended wavelength ranges are also available by request.

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