# EVERGREEN TWINS

## Quadruple-pulse Nd:YAG lasers for PIV

Quantel laser BY LUMIBIRD

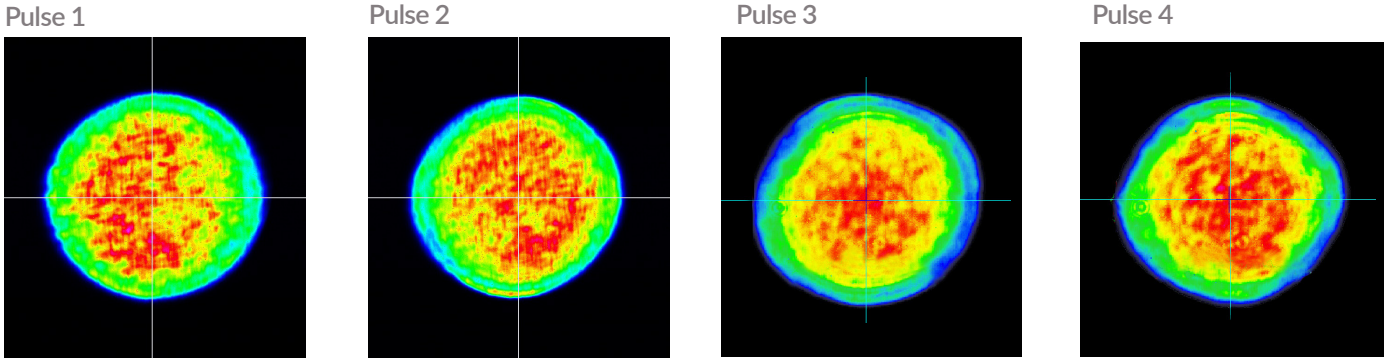

## MAIN FEATURES

- Built to withstand harsh environments
- IP 66 sealed
- MIL-STD-810 compliant for vibrations and shocks
- Temperature cycled
- Easily portable for real world applications with grab and go handles
- From shipping box to lasing in less than 10 min
- Beam overlap warranted for 2 years

## MAIN APPLICATIONS

- **PARTICLE IMAGE VELOCIMETRY**
- **LASER INDUCED FLUORESCENCE**
- **COMBUSTION**

### Typical beam profiles




Near Field 200 mJ @ 532 nm, 15 Hz



LUMIBIRD MORE THAN LASERS

PHOTONIC SOLUTIONS EST · 1999

Photonic Solutions Ltd
Edinburgh
EH14 4AP
+44 131 664 8122
www.photonicsolutions.co.uk

CE

# EVERGREEN TWINS

## Quadruple-pulse Nd:YAG lasers for PIV

Quantel laser BY LUMIBIRD

## SPECIFICATIONS

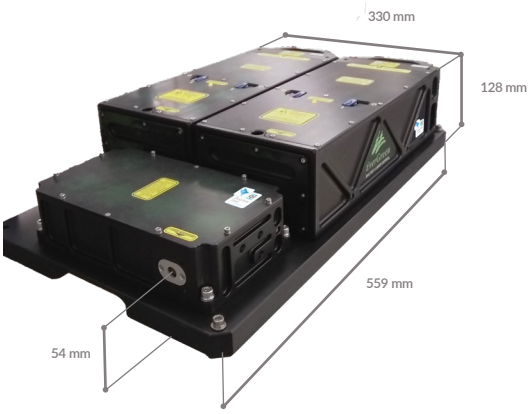
| | EVT00070 | EVT00145 | EVT00200 |
|---|---|---|---|
| Wavelength (nm) | 532 | | |
| Repetition rate (Hz) | 15 | | |
| Energy per pulse (mJ) (1) | 60 | 125 | 175 |
| Pulse duration (ns) (2) | ≤ 12 | | ≤ 10 |
| Near field nominal beam diameter (mm) | 5 | 6.35 | |
| Beam divergence (mrad) (3) | < 4 | | |
| Shot to shot pointing stability (µrad) | < 100 | | |
| Far field beam overlap (µrad) | ± 300 | | |
| Near field beam overlap (µm) | ± 300 | | |
| Polarization | 2 crossed polarization | | |
| Spectral purity (%) | > 98 | | |
| Near field beam profile | flat-top, uniform | | |

(1) Quadruple pulse system: energy given for each pulse
(2) FWHM at nominal energy
(3) Full angle containing 86.5 % energy

| | | |
|---|---|---|
| Temperatures | Operating | 18°C - 28°C |
| | Storage | 5°C - 50°C |
| Power requirements | | 2 x 100-240 VAC, 50/60 Hz, single phase |
| Flashlamps warranty | | 100 million shots (1) |
| Cooling | | Water to air |
| Triggers | | 5 V nominal into 50 Ω or high impedance loads, user selectable |
| Laser head operation | | Can operate in any orientation |
| Laser head sealing | | IP 66 sealed<br>Do not submerge in water |
| Power supply sealing | | IP 21 sealed |
| Laser vibration | | Complies with MIL-STD-810 |
| Cable length (m) | | 3 (2) |
| Weight (kg) | Laser head | 23 |
| | Integrated cooling & electronics | 18 each |

(1) 80% of energy, or 1 year, whichever comes first
(2) Other lengths up to 10 m on request

### Laser head




### 2 Integrated coolings & electronics




Laser control panel



LUMIBIRD MORE THAN LASERS

PHOTONIC SOLUTIONS EST • 1999

Photonic Solutions Ltd
Edinburgh
EH14 4AP
+44 131 664 8122
www.photonicsolutions.co.uk

CE