Centurion+

Laser solutions by **LUMIBIRD**

Diode pumped Q-switched Nd:YAG laser

MAIN FEATURES

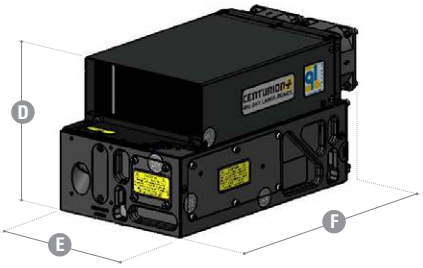
- STABLE PULSE ENERGY IN BURST MODE
- VARIABLE ATTENUATOR AND NON-LINEAR CRYSTALS INTEGRATED IN LASER HEAD
- HOMOGENEOUS NEAR FIELD BEAM INTENSITY PROFILES

CONFIGURATIONS

Wavelength configuration	1064	532	355	266
Wavelength [nm]	1064	532	355	266
Pulse energy [mJ]	> 50.0	> 25.0	> 8.0	> 2.5
Polarization	V	V	V	V

DIMENSIONS

Control electronics (optional)



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- A 98.1 mm [3.86"]
- B 163 mm [6.42"]
- C 220.9 mm [8.70"]
- D 142.3 mm [5.60"]
- E 154.4 mm [6.08"]
- F 277.7 mm [10.93"]

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SPECIFICATIONS

NEAR FIELD BEAM DIAMETER [mm] [1]	
1064 nm	3.5 +/- 0.5
532 nm	3.2 +/- 0.5
355 nm	3.0 +/- 0.5
266 nm	3.0 +/- 0.5
BEAM DIVERGENCE [mrad] [2]	
1064 nm	< 9.0
532 nm	< 8.0
355 nm	< 7.0
266 nm	< 6.0
RMS STABILITY (1σ) [%] [3]	
1064 nm	< 0.5
532 nm	< 1.0
355 & 266 nm	< 1.5
ENERGY STABILITY [%] [4]	
1064 nm	< 2.0
532 nm	< 2.5
355 & 266 nm	< 4.5
FIRST SHOT ENERGY STABILITY [%] [5]	
1064 nm	< 2.0
532 nm	< 2.5
355 & 266 nm	< 3.5

POINTING STABILITY [µrad] [6]	< 100
TRANSVERSE MODE	multiple
ENERGY DRIFT [%]	< 5% over 5 minutes
POLARIZATION	150:1 for linear polarized outputs
REPETITION RATE [Hz]	1 - 100
PULSE WIDTH [ns] [7]	12 +/- 2
WARM-UP TIME STANDBY TO FIRE [min]	< 10
OPERATING TEMPERATURE RANGE [°C]	15 - 35
STORAGE TEMPERATURE RANGE [°C]	5 - 60
POWER REQUIREMENTS	48 Vdc ± 10%, 5A (nominal)

[1] Beam widths are measured at the output window of the laser. Beam widths are measured using the second moments of the energy distribution.

[2] Beam divergence is full angle. Beam divergence is determined by measuring the widths of the transformed beam by an aberration-free focusing element, one focal length away from the rear principle plane of the element.

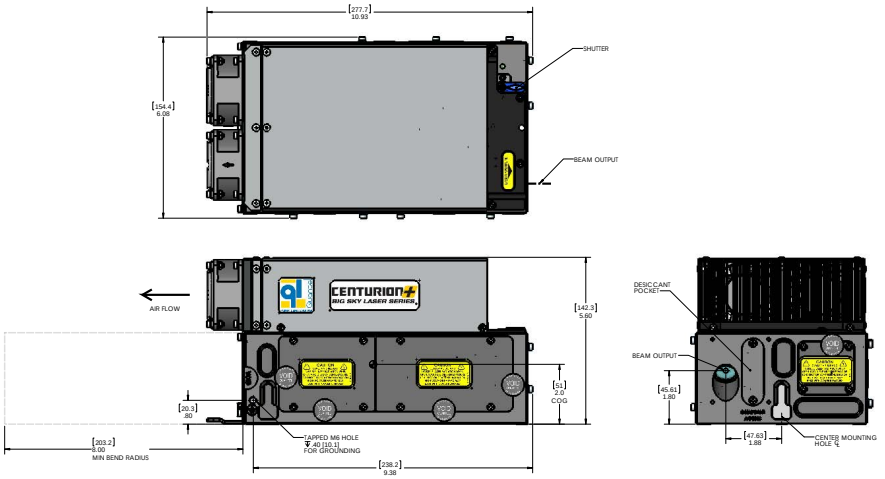
[3] RMS stability is defined as: (standard deviation)/(mean). RMS Stability is measured using the full laser beam for 6000 shots from turn-on at 100 Hz operation.

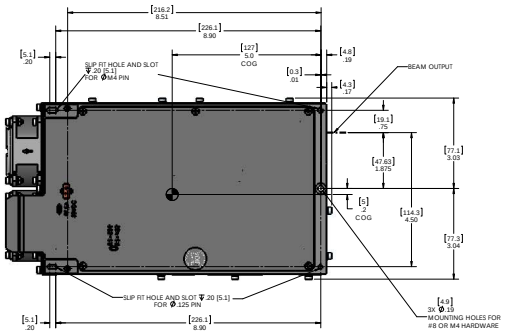
[4] Energy Stability is defined as: (max-min)/(max+min). Energy Stability is measured using the full laser beam for any interval, from turn-on, up to 6000 shots of 100 Hz operation. Energy stability shall be measured for five sets of 6000 shots from turn-on. All five sets shall conform to the energy stability specification.

[5] First shot energy stability is measured using the full laser beam. Five sets of 20 shots from turn-on at 1 Hz operation shall be recorded. Energy stability is defined as: (max-min)/(max+min). All five sets shall conform to the First shot energy stability specification.

[6] Pointing stability is measured on the 1064 nm laser output. It is measured as the transverse shift between the centroid of the beam for the 1st pulse and the centroid of the beam exhibiting the strongest transverse shift within the first 1000 consecutive shots at 100 Hz operation. Measurement is far field, at least 50 cm from the laser output window.

[7] Pulsewidth is measured on the initial 1064 nm output at 100 Hz PRF. The 1064 nm energy shall be within 40 mJ +/- 10% when pulse width is measured. Pulsewidth is calculated from the full-width half-maximum (FWHM) of the waveform.





Many options and configurations are available. Please contact Lumibird to find the best match for your needs and compatibility between options.