

# FALCON 157 - OEM VERSION

Ultra compact diode-pumped pulsed 1.57  $\mu\text{m}$  laser



## MAIN FEATURES

- Highly ruggedized diode-pumped solid-state laser (up to 60 g shock)
- Ultra compact & portable with battery operation
- «Eye safe» wavelength
- Sealed for operation in harsh environments
- Proven drop-resistance up to 1 meter
- Customized electronics integration upon request
- Beam quality optimized for focusability

## MAIN APPLICATIONS

- LIBS
- BIOTECHNOLOGY
- SPECTROSCOPY
- RANGING
- SENSING

## SPECIFICATIONS

FALCON 157	Collimated	Focused
Wavelength ( $\mu\text{m}$ )	1.57	
Repetition rate (Hz)	Up to 40 <sup>(1)</sup>	
Energy per pulse (mJ)	4.5	
Pulse duration (ns) <sup>(2)</sup>	< 6	
Beam diameter (mm)	$1.2 \pm 0.5$ <sup>(3)</sup>	< 0.14 <sup>(4)</sup>
Beam divergence (mrad) <sup>(5)</sup>	< 8	N/A
M2, focusability (times diffraction limit)	N/A	< 5
Pulse to pulse energy stability (% RMS)	< 2.5	
Operation mode	Burst / Continuous	
Power requirements (nominal)	+24 VDC, 25 W +3.3 VDC, 1 W	
Cooling	Passive convection 25 W	
Operating temperature ( $^{\circ}\text{C}$ )	5 to 35	
Storage temperature ( $^{\circ}\text{C}$ )	- 40 to 80	
Laser head sealing	IP 66 sealed Do not submerge in water	
Vibration and shock	Complies with MIL-STD-810 <sup>(6)</sup>	

(1) Active cooling required for 40 Hz continuous operation

(2) Measured at FWHM with fast photodiode and 1 GHz scope

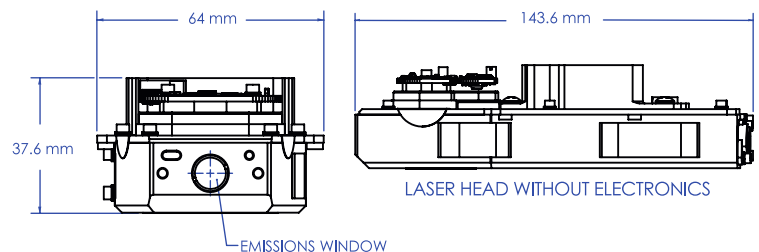
(3)  $D4\sigma$  at output window

(4) Waist diameter located 17 mm from the Falcon front interface

(5)  $D4\sigma$ , full angle

(6) up to 60 g shock

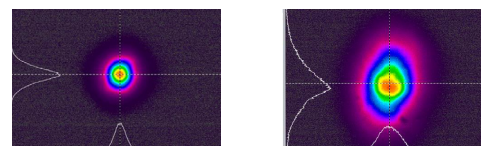
### Laser head



### Electronics

Contact Lumibird for customized electronics integration

### Typical beam profiles



Near field collimated

Far field collimated

[www.quantel-laser.com](http://www.quantel-laser.com)

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