

FALCON 157 - OEM VERSION

Ultra compact diode-pumped pulsed 1.57 μm 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

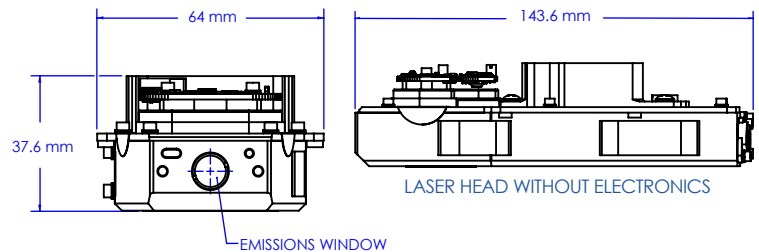
- LIBS
- BIOTECHNOLOGY
- SPECTROSCOPY
- RANGING
- SENSING

SPECIFICATIONS

FALCON 157	Collimated	Focused
Wavelength (μm)	1.57	
Repetition rate (Hz)	Up to 40 ⁽¹⁾	
Energy per pulse (mJ)	4.5	
Pulse duration (ns) ⁽²⁾	< 6	
Beam diameter (mm)	1.2 ± 0.5 ⁽³⁾	< 0.14 ⁽⁴⁾
Beam divergence (mrad) ⁽⁵⁾	< 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 ⁽⁶⁾	

- (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

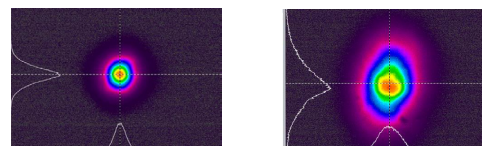
Laser head



Electronics

Contact Lumibird for customized electronics integration

Typical beam profiles



Near field collimated

Far field collimated

www.quantel-laser.com

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



Lumibird has locations across the globe that are available to provide support for any product, service or inquiry. Visit www.lumibird.com to connect with any of our global sites.



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