

Functional Requirements

Platform

Depth: depth of Robison dives

ROVs: must be functional for Robison mid-water dives on all platforms

Weight: must be able to mount laser to the front of ROVs

Size of system: laser must fit in front of ROV and remaining system must fit on vehicle

Electrical

Power: must provide adequate power for selected laser (Laserglow 1 W 671 nm DPSS laser), controller, and related components

Voltage: must use available voltages with sufficient wattage from each ROV

Communications: must be able to control the laser from the host ROV

Environmental

Temperature: stay within the range of the laser specifications

System Design Requirement

Platform

Depth: 4000m

ROVs: Ricketts, Ventana, MiniROV

Weight: laser housing <30 lbs

Size of system: TBD

Electrical

Power: +12V, 125 W peak, < 60 W nominal

Voltages:

Ricketts: 240 VDC, 110 VAC

Ventana: 375 VDC, 110 VAC

MiniROV: 400 VDC

Communications: RS232

Environmental

Temperature: 2 - 35° C