



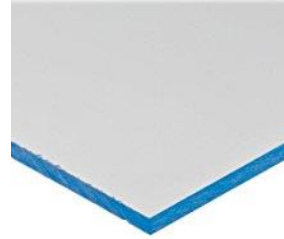

Caveatron Bill of Materials – 4m LIDAR Unit

Date: 2018-03-06

Item	Qty	Manufacturer	Mfr. P/N	Description	Suggested Vendor Link	Photo
LIDAR	1	Neato	from XV-11 Vacuum model	LIDAR Laser Distance Sensor	Ebay. - seller availability changes frequently. Occasionally on Amazon	
Notes: Scanning <i>LIDAR</i> sensor. Models listed as XV-11, XV-12, XV-14, XV-15, or XV-21 are all identical and will work the same.						
Voltage Regulator – Adjustable	1	Pololu	2118	Pololu Adjustable Step-Up/Step-Down Voltage Regulator S7V8A	Pololu	
Notes: Power supply for Laser Rangefinder. Output is set so that the LIDAR is rotating at about 285 RPM (must be between 250 and 300 RPM). The voltage needed varies from LIDAR unit to LIDAR unit though is typically about 2.8 - 3.0 V.						

Item	Qty	Manufacturer	Mfr. P/N	Description	Suggested Vendor Link	Photo
LIDAR Module Enclosure	1	Bud Industries	PN-1336-DG	ABS NEMA 4x Enclosure, Dark Gray	Amazon	
Notes: <i>Enclosure box for LIDAR module.</i> Requires machining of base to add holes for cable gland and rail mounts. Lid is replaced with a custom 3D printed lid, reusing the gasket from this lid. If no 3D printer available, lid can be used as cover with ½” wide slits cut along the length of all 4 sides, though this obstructs more of the LIDAR field of view in the corners than the custom lid. Available from many vendors.						
Cable Gland	1	Many sources	PG7	Waterproof Cable Gland Wire Feedthrough	Amazon or many other sources	
Notes: <i>Feeds LIDAR interface cable out of LIDAR enclosure.</i> Numerous small variations of style and color are available, so long as it is PG7 size.						

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Item	Qty	Manufacturer	Mfr. P/N	Description	Suggested Vendor Link	Photo
Window Material	1	Small Parts	5064981212	Acrylic Sheet, Transparent Clear, 0.06" Thickness, 12" Width, 12" Length	Amazon	
Notes: <i>Transparent acrylic sheet for Rangefinder window on Main Body and LIDAR windows on LIDAR Module.</i> Requires cutting to size. Acrylic seems to be the most transparent with the least distortion and defects of the various clear plastics tested ,which is important for not interfering with the LIDAR and rangefinder readings.						
Plastic Base Material	1	Small Parts	STPVC-0093-F	PVC Sheet, Opaque Gray, 0.093" Thickness, 12" Width, 24" Length	Amazon	
Notes: <i>Plastic sheet for mounting internal components in Main Body Enclosure and LIDAR Enclosure.</i> Requires cutting to size and drilling mounting holes.						

Assorted Fastener Hardware: Screws, Washers, and Nuts
Notes: <i>For assembly.</i> Several sizes of standard hardware required. To be detailed in assembly instructions.
Assorted Electrical Hardware: Wire and JST Connectors.
Notes: <i>For electrical interconnections between boards.</i> To be detailed in assembly instructions.