

Precision points for reference in underwater photos

The **MantaRay** is a parallel beam laser designed for ROV and subsea systems.

This laser projects two parallel beams that appear as green dots in images that are used to get distance and scale of underwater objects. It is lightweight, easily integrated with a subsea camera using a simple attachment, and is accurate to 5m distance. SubC LEDs and lasers are plug-and-play when coupled with the **Rayfin camera**.



Specifications		PN: MantaRay-Ti-100-2-P-1
Laser Specs	Parallelism	10cm ± 10mm @ 5m distance
	Output Power	≤5.00 mW
	Wavelength	520nm ± 10nm (green)
	Class	3R (avoid direct eye exposure/laser protective eye-wear recommended)
	Emission Type	CW
	Beam size at 10m	<6mm x 10mm
	Beam Divergence (Full Angle)	≤0.7 mRad
	Bore Sighting	≤2 mRad
	Focus Distance	Collimated
Electrical	Power	1.5 W per laser: 3W per parallel laser assembly
	Protection	Short circuit, over voltage, reverse voltage, ESD
	Min./Max. Temperature	-10°C - +30°C
	Voltage	7 Vdc - 32.5 Vdc
	Control	5 - 30 Vdc TTL modulation
Mechanical	Material	Sapphire, Grade 5 Titanium
	Depth Rating	6000m
	Weight (in air)	700g
	Weight (in water)	400g

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LASER RADIATION
AVOID DIRECT EYE EXPOSURE

Maximum output of laser radiation: ≤5.00 mW
 Emitted wavelength: 520nm ± 10nm





Titanium and sapphire construction

6000m

6000m depth rating

TTL Operation

- The laser is disabled by default when power is applied. To enable, apply 5 - 30Vdc to pin 3.
- When Pin 3 is left open or connected to GND, the output is disabled.

Included

- Calibrated delrin mount for 89mm diameter camera.
- Titanium hose clamps for attachment.
- Y-splice MCBH5M to 2x MCBH5F cable with locking sleeves.

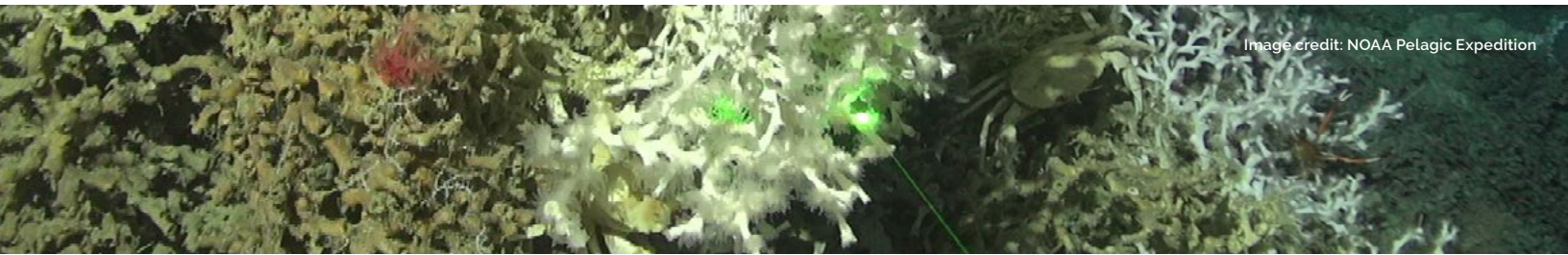
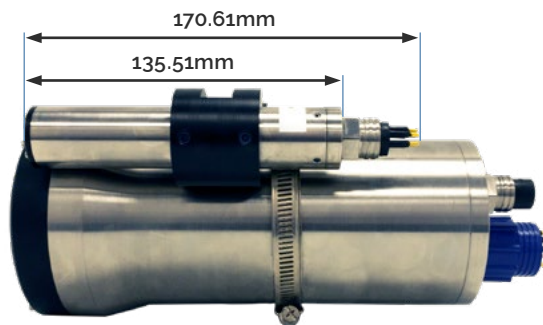
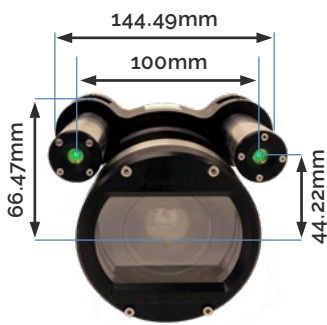


Image credit: NOAA Pelagic Expedition



Pin #	MCBH5M
1	GND
2	PWR
3	TTL Enabled
4	N/C
5	N/C