

The TIDAL™ 0.25m diameter Spar buoy with internal ballast and plastic mooring eye is designed for a low maintenance rope mooring. The internal ballast provides upright stability without the requirement for a chain mooring. It is used as a channel marker, regulatory buoy or to identify aquaculture lease sites.

KEY FEATURES

- Rugged Polyethylene Construction
- Plastic Mooring Eye for Rope Mooring
- Internal Radar Reflector
- Threaded inserts for solar powered lantern
- 100% Recyclable after a long service life

MANUFACTURED TO LAST

Virgin colour compounded UV-20 polyethylene designed and tested to provide long-lasting colour fade and impact resistance. Completely foam filled to prevent water ingress if the buoy is damaged.

INTERNAL RADAR REFLECTOR

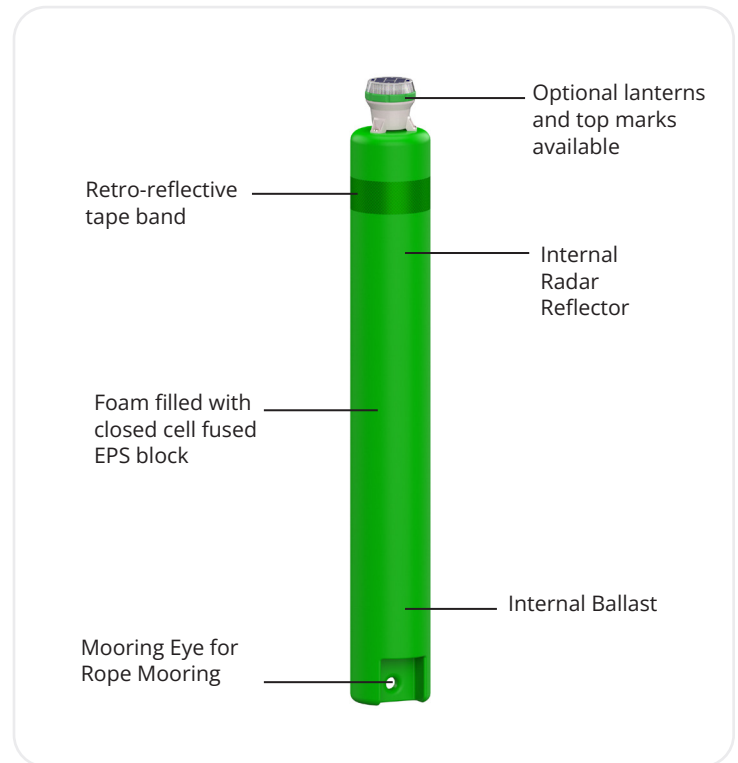
The top of the buoy contains a 2m² RCS internal radar reflector that Coast Guard clients have confirmed has a 0.5 NM range. The method of installing the reflector allows for its re-use.

CONVENIENT

The low reserve buoyancy allows for a small anchor block, the internal ballast means no chain is required, making this buoy easy to deploy and retrieve from a small workboat.

COLOUR CONFIGURATION

Available to meet the requirements of all IALA Colour / Configuration Recommendations with top marks and self-contained lanterns.



RECYCLING AND REUSE

All TIDAL™ buoys are manufactured solely with materials that are readily recyclable; items like the radar reflector are designed and secured so they can be re-used. Call to discuss how you or TIDAL™ can recycle your buoys.



GENERAL SPECIFICATIONS

Diameter	10.0 in.	0.25 m
Overall Height	72.0 in.	1.83 m
Mass	85 lbs.	39 kg
Buoy Floatation Volume	3.11 ft ³	0.088 m ³
Submergence (Freshwater)	2.84 lbs/in	0.51 kg/cm
Max. Mooring Mass (Air Weight) - Rope & Chain	29 lbs	13 kg
Min. Mooring Mass (Air Weight) - Rope Mooring	2 lbs	1 kg
Draught (at Min. Mooring Mass)	33.3 in	0.85 m
Reserve Buoyancy (at Maximum Mooring Mass)	43 lbs	19 kg

PERFORMANCE SPECIFICATIONS

Focal Plane Height (at Min. Mooring Mass)	44.2 in	1.12 m
Visible Height (at Min. Mooring Mass)	44.2 in	1.12 m
Visual Area / Surface (at Max Visible Height)	2.91 ft ²	0.27 m ²
Max. Distance of Recognition (at Max. Visible Height)	0.54 NM	1.00 Km
Radar Range	0.50 NM	0.93 Km
Internal Radar Reflector (RCS)	2 m ²	

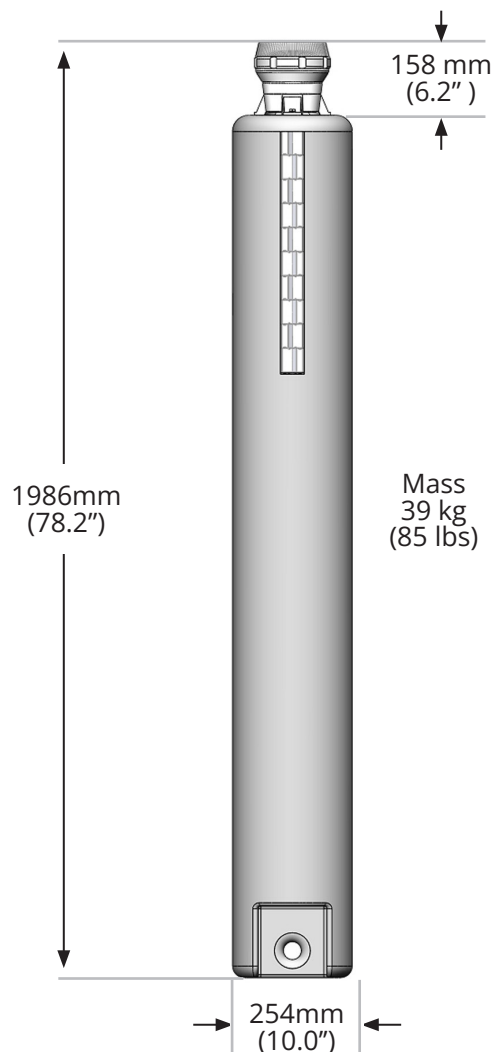
MATERIAL SPECIFICATIONS

Topmark	Conical topmark available
Buoy Hull	Virgin MDPE with UV20 protection package
Wall Thickness	1/4 in 7 mm
Foam Filling	Closed cell EPS fused in situ block
Lantern Inserts	316 stainless steel
Colours	Compliance with IALA Recommendation R0108
IALA Compliance Testing	Independent laboratory test results available
Colourfastness Test Procedure	Xenon Arc Accelerated Weathering per ASTM D-2565
Colourfastness Testing	Independent test results available per ASTM D-2244
Product Life Expectancy	15 to 20 years
Warranty	5 years

Mooring Line Design

- Mooring design to optimize the performance of each buoy.
- Advanced 3D dynamic analysis of the mooring line and buoy.
- Supply of custom mooring lines with proven components.
- Catenary, inverse-catenary, chain, and synthetics.

Our advanced modelling software can perform dynamic analysis of the interaction between the mooring line and the buoy in normal "operating" conditions to assess and optimize buoy performance. Importantly, this dynamic analysis is also used to assess performance across a range of "survival" conditions.



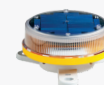
M550



M650



M660



We carry a wide range of self-contained and externally powered lights for navigation buoys from world leaders such as Sabik, Sealite, Ekta, and Vega.

Depending on the size and use of the buoy, we offer options such as AIS Type I or Type II, remote monitoring & control, and on-board solar power systems.

PERFORMANCE SUMMARY