

# Republic of the Marshall Islands

## MARITIME ADMINISTRATOR

11495 COMMERCE PARK DRIVE, RESTON, VIRGINIA 20191-1506  
TELEPHONE: +1-703-620-4880 FAX: +1-703-476-8522  
EMAIL: maritime@register-iri.com WEBSITE: www.register-iri.com

### YACHT SAFETY ADVISORY YSA No. 03-15

**To: Yacht Owners/Captains, Managers, Agents, Recognized Class Societies and Appointed Representatives**

**Subject: REQUIREMENTS FOR NAVIGATION LIGHTS, INCLUDING LEDS**

**Date: 10 December 2015 (renewed 10 December 2020)**

#### 1.0 General

Please be advised that the Republic of the Marshall Islands (RMI) Maritime Administrator (the “Administrator”) has been made aware of the sale and availability of vessel navigational lights that do not meet international performance standards for such lighting (United States Coast Guard Marine Safety Advisory 10-15). This is especially problematic because the use of lights (e.g., Light Emitting Diodes (LEDs), rope lighting, underwater lighting and decorative lighting) that do not provide the proper chromaticity, luminous intensity or cut-off angles has the potential to cause an accident.

This Advisory is applicable to all RMI flagged vessels, their ancillary vessels and other appurtenances to which COLREGs, 1972 apply.

Information required for the performance standards and usage of new technology light sources, LEDs in particular, as Navigation Lights can be found in the following publications:

1. The applicable chapter sections of the [RMI Yacht Code MI-103](#), referencing the requirements for Navigational Lights, Shapes and Sound Signals
2. COLREGs, 1972, Rule 20, Rule 21 and Rule 23 : concerning the requirements on the use of Navigation Lights; and
3. International Maritime Organization (IMO) Resolution [MSC.253\(83\)](#), §4.3 (Special requirements for lights using LEDs).

The relevant provisions from these publications are provided in section 2.0, below.

This YSA is evaluated annually by the Administrator and expires one year after its issuance or renewal unless otherwise noted, superseded, or revoked.

## **2.0 Details**

### **2.1 MI-103**

- .1 All yachts shall comply with the requirements of COLREGS '72.
- .2 Navigation lights shall have a primary and secondary means of power. The secondary source of power shall comply with sections 13.5.3 and 14.4.1 above as applicable.
- .3 For yachts less than 500 GT the requirements for duplication of navigation lights may be satisfied by having a spare lamp that can be fitted within three (3) minutes while underway.
- .4 The use of approved LED lights shall be to the satisfaction of the Administrator.

## **2.2 COLREGS - International Regulations for preventing Collisions at Sea, 1972**

### **2.2.1 Rule 20, Application**

- (a) Rules in this part shall be complied with in all weathers.
- (b) The Rules concerning lights shall be complied with from sunset to sunrise, and during such times no other lights shall be exhibited, except such lights as cannot be mistaken for the lights specified in these Rules or do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.
- (c) The lights prescribed by these Rules shall, if carried, also be exhibited from sunrise to sunset in restricted visibility and may be exhibited in all other circumstances when it is deemed necessary.
- (d) The Rules concerning shapes shall be complied with by day.
- (e) The lights and shapes specified in these Rules shall comply with the provisions of [Annex I](#) to these Regulations.

### **2.2.2 Rule 21, Definitions**

- (a) "Masthead light" means a white light placed over the fore and aft centreline of the vessel showing an unbroken light over an arc of the horizon of 225 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on either side of the vessel.

- (b) “Sidelights” means a green light on the starboard side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on its respective side. In a vessel of less than 20 metres in length the sidelights may be combined in one lantern carried on the fore and aft centreline of the vessel.
- (c) “Sternlight” means a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135 degrees and so fixed as to show the light 67.5 degrees from right aft on each side of the vessel.
- (d) “Towing light” means a yellow light having the same characteristics as the “sternlight” defined in paragraph (c) of this Rule.
- (e) “All-round light” means a light showing an unbroken light over an arc of the horizon of 360 degrees.
- (f) “Flashing light” means a light flashing at regular intervals at a frequency of 120 flashes or more per minute.

### 2.2.3 Rule 22, Visibility of lights

The lights prescribed in these Rules shall have an intensity as specified in [section 8](#) of Annex I to these Regulations so as to be visible at the following minimum ranges:

- (a) In vessels of 50 metres or more in length:
  - a masthead light, 6 miles;
  - a sidelight, 3 miles;
  - a sternlight, 3 miles;
  - a towing light, 3 miles;
  - a white, red, green or yellow all-round light, 3 miles.
- (b) In vessels of 12 metres or more in length but less than 50 metres in length;
  - a masthead light, 5 miles; except that where the length of the vessel is less than 20 metres, 3 miles;
  - a sidelight, 2 miles;
  - a sternlight, 2 miles;
  - a towing light, 2 miles;
  - a white, red, green or yellow all-round light, 2 miles.
- (c) In vessels of less than 12 metres in length:
  - a masthead light, 2 miles;
  - a sidelight, 1 mile;
  - a sternlight, 2 miles;
  - a towing light, 2 miles;

- a white, red, green or yellow all-round light, 2 miles.
- (d) In inconspicuous, partly submerged vessels or objects being towed:
- a white all-round light, 3 miles.

## **2.3 Resolution MSC. 253 (83)**

### **§4.3 Special requirements for lights using LEDs**

- 1.1 The luminous intensity of LEDs gradually decreases while the electricity consumption remains unchanged. The rate of decrease of luminous intensity depends on the output of LEDs and temperatures of LEDs.
- 1.2 To prevent shortage of luminous intensity of LEDs:
- .1. An alarm function should be activated to notify the Officer of the Watch that the luminous intensity of the light reduces below the level required by COLREGs; or
  - .2. LEDs should only be used within the lifespan (practical term of validity) specified by the manufacturer to maintain the necessary luminous intensity of LEDs. The lifespan of LEDs should be determined and clearly notified by the manufacturer based on the appropriate test results on the decrease of luminous intensity of the LEDs under various temperature conditions and on the temperature condition of LEDs in the light during operation, taking the appropriate margin into account.
- 3.0** For further information on the application of the requirements for navigational lights on yachts, please contact the Administrator at: [Yachttec@register-iri.com](mailto:Yachttec@register-iri.com)