

# **PART 84—ANNEX I: POSITIONING AND TECHNICAL DETAILS OF LIGHTS AND SHAPES**

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## **§ 84.01 Definitions.**

(a) The term *height above the hull* means height above the uppermost continuous deck. This height shall be measured from the position vertically beneath the location of the light.

(b) *High-speed craft* means a craft capable of maximum speed in meters per second (m/s) equal to or exceeding:  $3.7\sqrt[0.1667]{V}$ ; where  $V$ =displacement corresponding to the design waterline (cubic meters).

NOTE TO PARAGRAPH (b): The same formula expressed in pounds and knots is maximum speed in knots (kts) equal to exceeding 1.98 ( $\text{lbs}$ )  $\sqrt[0.1667]{V}$ ; where  $V$ =displacement corresponding to design waterline in pounds.

(c) The term *practical cut-off* means, for vessels 20 meters or more in length, 12.5 percent of the minimum luminous intensity (Table 84.15(b)) corresponding to the greatest range of visibility for which the requirements of Annex I are met.

(d) The term *Rule* or *Rules* means the Inland Navigation Rules contained in sec. 2 of the Inland Navigational Rules Act of 1980 (Pub. L. 96-591, 94 Stat. 3415,

33 U.S.C. 2001, December 24, 1980) as amended.

[CGD 81-008, 46 FR 62447, Dec. 24, 1981, as amended by CGD 94-011, 63 FR 5731, Feb. 4, 1998; USCG-2012-0306, 77 FR 37313, June 21, 2012]

## **§ 84.03 Vertical positioning and spacing of lights.**

(a) On a power-driven vessel of 20 meters or more in length the masthead lights shall be placed as follows:

(1) The forward masthead light, or if only one masthead light is carried, then that light, at a height above the hull of not less than 5 meters, and, if the breadth of the vessel exceeds 5 meters, then at a height above the hull not less than such breadth, so however that the light need not be placed at a greater height above the hull than 8 meters;

(2) When two masthead lights are carried the after one shall be at least 2 meters vertically higher than the forward one.

(b) The vertical separation of the masthead lights of power-driven vessels shall be such that in all normal conditions of trim the after light will be seen over and separate from the forward light at a distance of 1000 meters from the stem when viewed from water level.

(c) The masthead light of a power-driven vessel of 12 meters but less than 20 meters in length shall be placed at a height above the gunwale of not less than 2.5 meters.

(d) The masthead light, or the all-round light described in Rule 23(c), of a power-driven vessel of less than 12 meters in length shall be carried at least one meter higher than the sidelights.

(e) One of the two or three masthead lights prescribed for a power-driven vessel when engaged in towing or pushing another vessel shall be placed in the same position as either the forward masthead light or the after masthead light, provided that the lowest after masthead light shall be at least 2 meters vertically higher than the highest forward masthead light.

(f)(1) The masthead light or lights prescribed in Rule 23(a) shall be so placed as to be above and clear of all other lights and obstructions except as

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described in paragraph (f)(2) of this section.

(2) When it is impracticable to carry the all-round lights prescribed in Rule 27(b)(1) below the masthead lights, they may be carried above the after masthead light(s) or vertically in between the forward masthead light(s) and after masthead light(s), provided that in the latter case the requirement of § 84.05(d) shall be complied with.

(g) The sidelights of a power-driven vessel shall be placed at least one meter lower than the forward masthead light. They shall not be so low as to be interfered with by deck lights.

(h) [Reserved]

(i) When the Rules prescribe two or three lights to be carried in a vertical line, they shall be spaced as follows:

(1) On a vessel of 20 meters in length or more such lights shall be spaced not less than 1 meter apart, and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than 4 meters above the hull;

(2) On a vessel of less than 20 meters in length such lights shall be spaced not less than 1 meter apart and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than 2 meters above the gunwale;

(3) When three lights are carried they shall be equally spaced.

(j) The lower of the two all-round lights prescribed for a vessel when engaged in fishing shall be a height above the sidelights not less than twice the distance between the two vertical lights.

(k) The forward anchor light prescribed in Rule 30(a)(i), when two are carried, shall not be less than 4.5 meters above the after one. On a vessel of 50 meters or more in length this forward anchor light shall be placed at a height or not less than 6 meters above the hull.

[CGD 81-008, 46 FR 62447, Dec. 24, 1981, as amended by CGD 89-024, 55 FR 3947, Feb. 6, 1990; USCG-2012-0306, 77 FR 37313, June 21, 2012]

### § 84.05 Horizontal positioning and spacing of lights.

(a) Except as specified in paragraph (e) of this section, when two masthead

lights are prescribed for a power-driven vessel, the horizontal distance between them must not be less than one quarter of the length of the vessel but need not be more than 50 meters. The forward light must be placed not more than one half of the length of the vessel from the stem.

(b) On a power-driven vessel of 20 meters or more in length the sidelights shall not be placed in front of the forward masthead lights. They shall be placed at or near the side of the vessel.

(c) When the lights prescribed in Rule 27(b)(i) are placed vertically between the forward masthead light(s) and the after masthead light(s) these all-round lights shall be placed at a horizontal distance of not less than 2 meters from the fore and aft centerline of the vessel in the athwartship direction.

(d) When only one masthead light is prescribed for a power-driven vessel, this light must be exhibited forward of amidships. For a vessel of less than 20 meters in length, the vessel shall exhibit one masthead light as far forward as is practicable.

(e) On power-driven vessels 50 meters but less than 60 meters in length operated on the Western Rivers, and those waters specified in § 89.25, the horizontal distance between masthead lights shall not be less than 10 meters.

[CGD 81-008, 46 FR 62447, Dec. 24, 1981, as amended by CGD 88-07, 53 FR 10533, Apr. 1, 1988; CGD 94-011, 63 FR 5731, Feb. 4, 1998]

### § 84.07 Details of location of direction-indicating lights for fishing vessels, dredgers and vessels engaged in underwater operations.

(a) The light indicating the direction of the outlying gear from a vessel engaged in fishing as prescribed in Rule 26(c)(2) shall be placed at a horizontal distance of not less than 2 meters and not more than 6 meters away from the two all-round red and white lights. This light shall be placed not higher than the all-round white light prescribed in Rule 26(c)(1) and not lower than the sidelights.

(b) The lights and shapes on a vessel engaged in dredging or underwater operations to indicate the obstructed side and/or the side on which it is safe to pass, as prescribed in Rule 27(d)(1) and (2), shall be placed at the maximum