

INCH-POUND

A-A-50444

12 August 1991

COMMERCIAL ITEM DESCRIPTION

LIGHT, STROBE, LIFE PRESERVER

The General Services Administration has authorized the use of this Commercial Item Description (CID) as a replacement for Military Specification MIL-L-573E, which is canceled.

ABSTRACT

This commercial item description describes a strobe light to be used as an emergency signalling device for U.S. Navy life preservers.

SALIENT CHARACTERISTICS

1. The light shall be as simple and rugged in construction as practicable. The complete light shall consist of a case, switch, lens, and a flashtube module. The light shall be furnished complete, except that the battery will not be included. The light shall be of the non short-circuiting type, that is, the battery circuit cannot be closed by metallic contact outside the case. The light shall be capable of being readily disassembled and reassembled. The maximum overall dimension shall not exceed 5 inches. The volume based on a cylinder, using the overall dimensions, shall not exceed 18 cubic inches.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Sea Systems Command, SEA 5523, Department of the Navy, Washington, DC 20362-5101, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 6230

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2. The light case shall be suitable to receive a standard "D" cell alkaline battery and shall have a minimum inside diameter, excluding all switch parts and contact strip, of 1.44 inches. It shall be as light as possible and show no cracks or flaws when subjected to the impact test. The light shall be maintained at a temperature of minus 20 degrees fahrenheit ($^{\circ}\text{F}$) for 2 hours, and then be subjected, while at this temperature, to a 12 inch-pound impact using a 1 pound steel ball. The point of impact shall be normal to any plane through the axis of the tubular body midway between the bottom and top of the case. Impact tests shall be conducted on assembled lights (without batteries).

3. The case shall be made of plastic, orange in color, and shall not deform when subjected to a temperature of 150°F nor become brittle when subjected to a temperature of -20°F , both for a period of 2 hours.

4. A switch shall be mounted on the case and shall be a watertight push button type. All parts of the switch except contacts and springs shall be made of corrosion-resisting metal. Contacts and springs shall be made of corrosion-resisting metal or metal treated to prevent corrosion. The complete switch shall be as small as practicable and the overall height above the outside surface of the case shall not exceed $9/16$ inch. All metal parts of the switch extending to the inside of the case shall be suitably insulated or protected to prevent short-circuiting of the switch in case metal-clad cells are used. The switch shall be of a permanent contact type, that is, the contact strip shall be insulated from the case and shall make a firm, permanent contact with the metal disk in which the flashtube is mounted, when the light is completely assembled. The opening and closing of the circuit shall be accomplished in the switch itself. Switches shall be capable of operating through 5000 cycles at 15 cycles per minute.

5. The light and switch shall both be watertight when submerged for 1 hour in seawater or equivalent salt water solution having a specific gravity of 1.025 to 1.040, to such a depth that the highest point of the light is under a 3 foot head. After removal from the water, the light shall be examined for leakage of water into the switch, and into the interior. The light shall be operable after the test and there shall be no evidence of internal moisture.

6. The case shall be provided with a metal safety pin for securing the complete light to a fabric. The pin shall be made of continuous, spring tempered wire, looped over on itself to form a securing loop for the pin and shall have an overall length of not less than 2 inches. The point of the pin shall be rounded to prevent puncturing of inflatable fabrics. When in the closed

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position, the point of the pin shall be adequately covered to protect operating personnel. The pin shall be mounted on the case in such a manner that the major axis of the pin is parallel to the axis of the case. There shall be no movement of the pin in excess of 3/16 inch in a direction parallel to its major axis. The point of the pin shall point toward the closed end of the case. When secured to a fabric the light shall be capable of withstanding a pull of 50 pounds without becoming detached. The screw threads on the case shall be smooth and close fitting.

7. The lens shall be clear and shall be of a molded plastic compound with a heat distortion of not less than 170 °F. The lens shall have a domed shape so proportioned that the light issuing from the completely assembled lighted unit shall have a beam width of not less than 180 degrees measured on any plane through the axis of the lens. Actual configuration of the lens design as to surface curvatures and fluting shall be at the option of the manufacturer.

8. A suitable capacitor-discharge sealed flashtube module with dimensions as noted in figure 1, shall provide intermittent flashes of light and shall be compatible with the lens so that light is emitted over a 180 degree angle, measured on a plane perpendicular to the long axis of the lens. The surface underneath the flashtube shall be a highly polished reflective material. The flashtube shall have an operating life span of not less than 200 hours before wearout failure occurs. With a fresh battery, the module shall have a minimum initial flash rate of 50 per minute at 70 °F and 1.8 effective candellas minimum, and will be expected to perform for a minimum ten hours continuous service with the specified battery.

9. Metallic components of the item shall be electrically conductive, corrosion resistant material or treated adequately to be corrosion resistant.

10. The weight of the light, without battery, shall not exceed 6 ounces.

11. Exterior metal parts shall, whenever possible, be given a black oxide finish.

12. Each light shall have a legible waterproof label providing the following information: manufacturer's name, national stock number (NSN), contract number, and manufacturer's model number.

13. A 100 hour salt spray test shall be conducted on the assembled light including the battery in accordance with ASTM B117. The unit shall show no corrosion or other damage that would appreciably affect its operation.

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14. The issue of referenced documents in effect on the date of the invitation for bid or request for proposal shall be used to determine compliance.

CONTRACTOR CERTIFICATION.

The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this Commercial Item Description, and that the product conforms to the producers own drawings, specifications, standards, and quality assurance practices. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

REGULATORY REQUIREMENTS.

The offeror/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practicable.

PRESERVATION, PACKAGING, PACKING, LABELING AND MARKING.

Commercial requirements:

Each strobe light unit shall be individually packed in accordance with ASTM D3951.

Military requirements:

When specified in the contract or order, strobe lights shall be preserved level A or C, packed level A, B and C and marked in accordance with MIL-E-17555.

Marking: In addition to the marking requirements of ASTM D3951 or MIL-E-17555, units packs and exterior shipping containers shall include the bar code marking specified in MIL-STD-129.

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MILITARY INTERESTS:

Preparing activity:
Navy -SH
(Project 6230-1024)

Custodians

Army - ME

Navy - SH

Review Activity

Navy - AS

User Activity

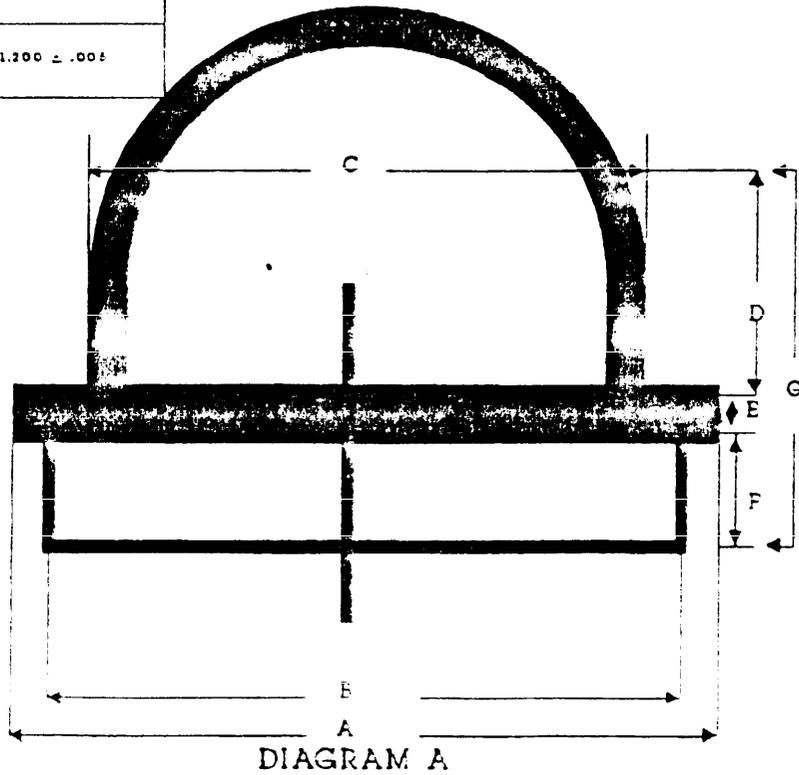
Army - AT

Navy - YD, MC

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|---|--------------|
| A | 1.400 ± .020 |
| B | 1.425 ± .005 |
| C | 1.190 ± .010 |
| D | 0.780 ± .003 |
| E | 0.085 ± .003 |
| F | 0.362 ± .003 |
| G | 1.200 ± .005 |

NOTE: ALL DIMENSIONS ARE IN INCHES.

FIGURE 1. Dimensions of a sealed flashtube module.