

**INCH-POUND**

**A-A-55432**

**26 August 1993**

**COMMERCIAL ITEM DESCRIPTION**

**LIGHT, CHEMILUMINESCENT, 15 IN - 12 HR - B, E, F**

The General Services Administration has authorized the use of this commercial item description.

Abstract.

This description covers 12 hour 15 inch chemiluminescent lights (commonly known as a light wand) used for a variety of lighting, marking, and identification purposes.

Salient characteristics.

1. Color. The colors of the chemiluminescent light described in this CID are green, yellow and red. The color wand required shall be identified in the Part Identification Number (PIN) paragraph of this CID.

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data which may improve this document should be sent to: Commander, Space and Naval Warfare Command, ATTN: SPAWAR 003-114/031, Washington, DC 20363.

AMSC N/A

FSC 6260

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2. Design. The chemiluminescent light shall be elongated having an overall length of 16 inches plus 0.340 or minus 0.203 inches. The diameter shall be .703 inches plus or minus 0.060 inches and have a flat base on one end. Each end shall also have an extended boss .406 inches nominal wide, with a hole .188 inches nominal. Wand shall be compatible with Handle, Light, Safety NSN 6260-01-255-3345.

3. Interior. The chemiluminescent lights specified in this Commercial Item Description shall produce a level of light intensity as specified in Table I for a specified length of time (12 hours).

4. Material Safety Data Sheet. Manufacturer shall provide evidence in the form of a Material Safety Data Sheet (MSDS (Fed-Std-313) that the components shall not be highly toxic, toxic, corrosive or irritant in terms of the definitions and tests in Code of Federal Regulations, Title 16, Part 1500 (Federal Hazardous Substances Act).

5. Test criteria. Illuminance must meet or exceed the data presented in Table I. After Ageing Test, illuminance must meet or exceed data in Table II. Activated by manually flexing the plastic tube, breaking the inner vial and shaking to combine components. Plastic tube shall not leak and vial will not break when subjected to an external pressure equivalent to 30,000 feet at 75 degrees F in a vacuum chamber. Must withstand, while in wrapper, a free fall from a height of 8.5 feet on a hard surface (concrete) without activating or leakage.

6. Test conditions.

a. Meter: Digital Photometer, TEKTRONIX, Model J16, Sensor Probe J6501. All meters traceable to NIST.

b. Wand to Meter Distance: 1.50 inches  $\pm$  0.02 inches.

c. Temperature stabilization: Wands while still in sealed foil wrappers, will be placed in a water bath at test temperature for a minimum of one (1) hour before activation.

d. Remove wand from sealed foil wrapper immediately before activation. Light wand shall be handled by cap end during testing.

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- e. Activation method: Bend; agitate for fifteen (15) seconds.
- f. Wands shall be agitated for ten (10) seconds before each reading.
- g. Wands kept under cover or in darkness; may be exposed to light during movement to and from light meter.
- h. All meter readings made in darkness.
- i. Meter kept at 75 degrees F for all tests.
- j. Temperature tolerances: plus or minus 2 F.
- k. Holder, wand test fixture in accordance with DGSC drawing, DGSCV-91-03, Part Number 2. (Enclosure 1)
- l. Chemiluminescent lights shall be held in a vertical position with cap end down when light output measurement is made.
- m. Ageing Test - test conditions to be added at a future date.

Contractor certification. The contractor shall certify, and maintain objective quality evidence that the product offered to the Government meets the salient characteristics of this description and that the product conforms to the producer's own drawings, specifications, standards, and quality assurance practices and is the same produced as the manufacturer's current product offered by the contractor in the commercial marketplace for at least one year preceding the solicitation. 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.

Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they fall within specified tolerances using conversion tables contained in the latest revision of Federal Standard No. 376, and all other requirements of this Commercial Item Description are met.

If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should be made to the Contracting Officer to determine if the product is acceptable. The Contracting Officer has the option of accepting or rejecting the product.

**TABLE I**  
**LIGHT INTENSITY VS TIME**  
**(MINIMUM REQUIREMENTS)**

COLOR	15 MIN	1 HR	2 HR	3 HR	4 HR	5 HR	6 HR	8 HR	10 HR	12 HR
BLUE	A	4.251	2.889	1.224	0.614	0.270	0.198	0.120	0.095	0.078
	B	45.76	31.10	13.18	6.61	2.91	2.14	1.30	1.03	0.85
RED	A	0.552	0.519	0.474	0.367	0.277	0.230	0.157	0.104	0.077
	B	5.95	5.59	5.11	3.96	2.99	2.48	1.69	1.12	0.83
YELLOW	A	2.302	1.832	1.611	1.366	1.056	0.850	0.700	0.467	0.365
	B	24.70	19.73	17.35	14.71	11.70	7.70	5.20	3.70	3.00

**NOTES:**

- (a) LUMENS PER SQUARE FOOT  
 (b) LUMENS PER SQUARE METER  
 DUAL DIMENSIONS ARE CITED AS A CONVENIENCE TO MANUFACTURERS  
 USING METRIC CALIBRATED INSTRUMENTS.
- ALL TESTS TO BE CONDUCTED AT 75 DEGREES F  $\pm$  2 DEGREES F OR  
 24 DEGREES C  $\pm$  1 DEGREE C (AS APPLICABLE)  
 ("A") AFTER INTENSITY READING INDICATES WAND TO METER DISTANCE EQUAL  
 TO ZERO (0) INCHES

**TABLE II**  
**LIGHT INTENSITY VS TIME**  
**(MINIMUM REQUIREMENTS)**

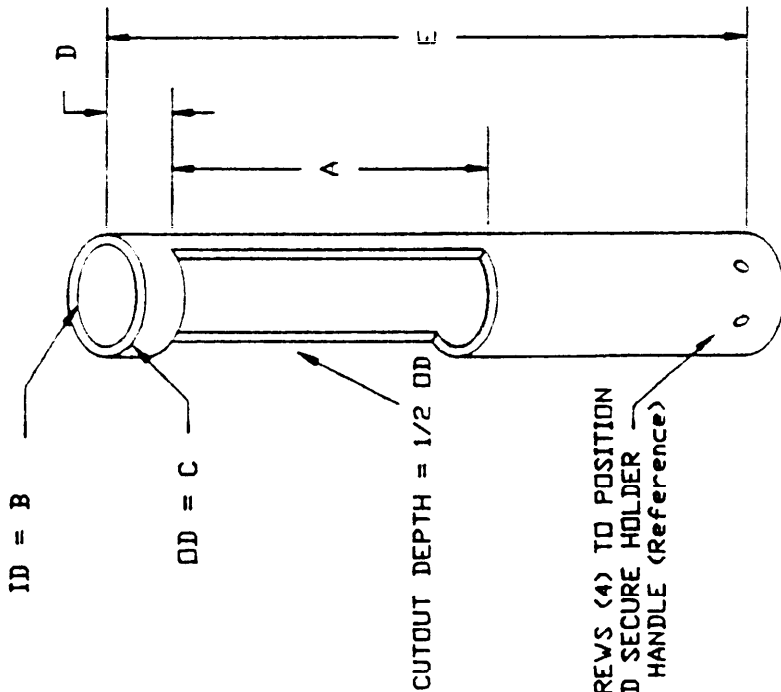
Table Data to be Added at a Future Revision Date

REVISIONS

LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	CHG'D NOTE 1 PAINT SPEC FOR IR WAND WAS ECP-2000 BLACK NEXTEL(CR NON-REFLECTIVE)	91-02-05	G. REYNOLDS
B	DIMENSIONS CHANGED TO INCH-POUNDS	92-28-04	R. THOMAS

NOTES:

1. FINISH - WHEN USED WITH VISIBLE LIGHT WAND - FLAT, NONREFLECTIVE BLACK. - WHEN USED WITH NON-VISIBLE IR WAND - PAINT WITH ITT RESEARCH INSTITUTE MH-2200 (IR NON-REFLECTIVE) PAINT (ITT RESEARCH INSTITUTE, 10 WEST 35TH STREET, CHICAGO, IL 60616, TELEPHONE 312 567-4432) OR WITH KRYLON ULTRA FLAT (UF) BLACK \ 1011-2 PAINT.
2. MATERIAL: UNSPECIFIED.
3. ALL DIMENSIONS IN INCHES.
4. DRAWING NOT TO SCALE.



SCREWS (4) TO POSITION AND SECURE HOLDER ON HANDLE (Reference)

HANDLE SECURED TO TEST STAND (Reference)

NO.	A	B	C	D	E
1	2.156±.031	.516	.625 (Ref.)	.234±.031	4.000 (Ref.)
2	5.125±.031	.703±.062	.859 (Ref.)	6.297±.391	15.000 (Ref.)
3	3.938±.031	.625	.781 (Ref.)	.234±.031	6.000 (Ref.)

DRAWN BY  
T. MOSS  
91-04-18

CHECKED BY  
R. THOMAS  
91-04-18

ENG. APPROVAL  
G. REYNOLDS  
91-04-18

DGSC APPROVAL  
R. SCHAFFER  
91-04-18

MILACT. APPROVAL  
DATE

DEFENSE LOGISTICS AGENCY  
DEFENCE GENERAL SUPPLY CENTER  
RICHMOND, VA. 23297-5000

HOLDER, WAND TEST FIXTURE

SIZE CAGE NO. DWG. NO. REV

A 13873 DGSCV-91-03 B

SCALE NONE

SHEET 1 OF 1

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

Quality assurance.

Foil leakage. Samples will be tested for foil leakage by application of 6 psi air pressure into the inside of the foil wrap while submerged under water. A steady stream of air bubbles coming from any portion of the foil, except where the foil has been penetrated by the air supply shall be classified as an airtight foil failure.

Shelf life. Each chemiluminescent light shall have a minimum of 42 months life remaining at the time of delivery to the Government and must have been manufactured within 6 months of the date of delivery to the Government.

Fluid Level. The vertical fluid level, when measured from the exterior of the flat base shall be no less than 12.2 inches.

Preservation, packaging, packing, labeling, and marking.

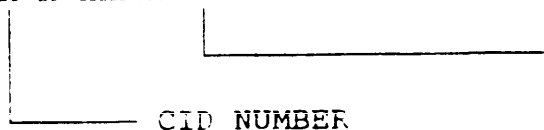
The preservation, packaging, packing, labeling, and marking shall be as specified in the contract or order.

Foil wrapping and all other packaging shall be marked with manufacturer's lot number and expiration date.

Foil wrapping shall be color coded and contain operating instructions.

CID based Part Identification Number. The following Part Identification Numbering procedure is for Government purposes and does not constitute a requirement for the contractor.

A-A-XXXXX-X



COLOR  
B=GREEN  
E=RED  
F=YELLOW

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Notes.

Ordering data. Acquisition documents must specify the following:

- a. Title, number, and date of this document.
- b. Material Safety Data Sheet (MSDS) shall be provided to Contracting Officer prior to award (FAR 52.223-3 and MSDS Page 2).
- c. Contracting Officer may request proof of certification of commercial item prior to first contract delivery (See 5).

MILITARY INTEREST:

CIVIL AGENCY COORDINATING ACTIVITY:

MILITARY COORDINATING ACTIVITY:

GSA-FSS

Custodians

Navy-EC  
Air Force-99

PREPARING ACTIVITY:

Navy-EC

Reviewing Activities

DLA-GS

AGENT: DLA-GS

User Activities

Navy-YD

PROJECT NO. 6260-1023

FSC 6260