

INCH-POUND

**A-A-55131
December 10, 1992**

COMMERCIAL ITEM DESCRIPTION

LIGHT, CHEMILUMINESCENT, 6 IN - 8 HR - A, G

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

Abstract.

This description covers 8 hour 6 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 lights described in this CID are blue and white. 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

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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2. Design. The chemiluminescent light shall be elongated having an overall length of 6 inches plus 0.043 minus 0.375 inches. The mid point diameter shall be no less than .500 inches and the wand shall have a flat base on one end. The diameter of the flat end shall not exceed .750 inches. The end opposite the flat base shall have a hole .188 inches nominal. Lightsticks shall have a tapered shape and shall be compatible with the following accessory items; Lightstick Shield (NSN 6260-01-196-0637), Ground Stake (NSN 6260-01-230-8555), Flare, Surface Trip (NSN 6260-01-247-2937), Handle, six (6) inch (NSN 6260-01-255-3345), and Magnetic Base (NSN 6260-01-255-3346). Lightsticks shall be individually wrapped in an airtight wrapper.

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 (8 hours). The chromaticity of the emitted light must also meet the requirements in Table I.

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. The integrated luminance over the first 15 minutes starting 5 seconds after activation measured at 75 F on lightsticks a minimum of 30 days after manufacture, but not more than 90 days, must meet or exceed 4.6 foot lambert-hours. Emits white color light. 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 a free fall, while still in wrapper, 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 Tektronix J16 Meter Distance: 1.50 ± 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 ten (10) 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 3. (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 revision 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.

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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
BLUE	a	0.227	0.165	0.057	0.027	0.018	0.006	0.003
	b	2.45	1.78	0.62	0.30	0.20	0.07	0.04
WHITE	a	1.052	0.511	0.258	0.170	0.117	0.078	0.065
	b	11.33	5.51	2.78	1.83	1.27	0.85	0.70

NOTES:

- LUMENS PER SQUARE FOOT
 - 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)
- (*) CIE CHROMATICITY - COORDINATE MEASUREMENTS MUST MEET (WHITE) THE FOLLOWING MEASURED 10 MINUTES AFTER ACTIVATION AT 75 DEGREES F \pm 2 DEGREES F.

COORDINATE GREEN 38.3 \pm 1.3%

COORDINATE RED 19.1 \pm 0.6%

COORDINATE BLUE 42.6 \pm 1.9%

TABLE II
LIGHT INTENSITY VS TIME
(MINIMUM REQUIREMENTS)

Table Data to be Added at a Future Revision Date

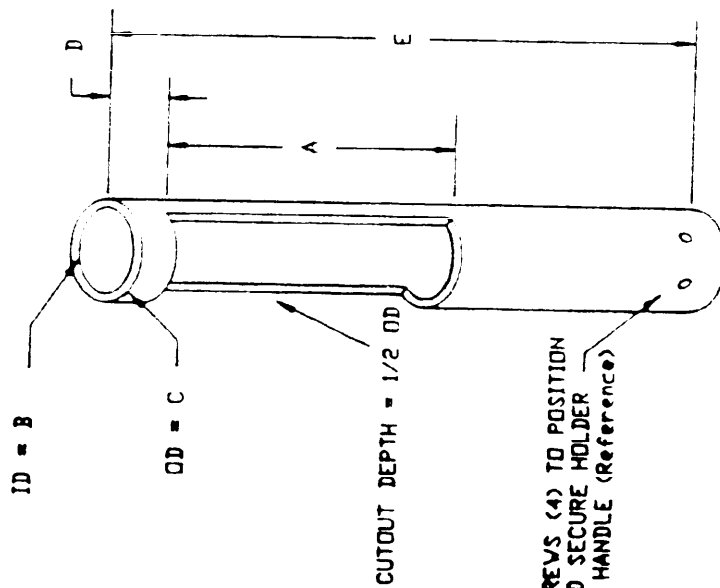
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REVISIONS			
LTR	DESCRIPTION	DATE (YY-MM-DD)	APPROVED
A	CHG'D NOTE 1 PAINT SPEC FOR IR WAND WAS ECP-2000 BLACK NEXTEL (IR NON-REFLECTIVE)	91-02-05	G. REYNOLDS
B	DIMENSIONS CHANGED TO INCH-POUNDS	92-08-04	R. THOMAS

NOTES:

1. FINISH - WHEN USED WITH VISIBLE LIGHT WAND - FLAT, NONREFLECTIVE BLACK. - WHEN USED WITH NON-VISIBLE IR WAND - PAINT WITH IIT RESEARCH INSTITUTE 44-2200 (IR NON-REFLECTIVE) PAINT (IIT RESEARCH INSTITUTE, 10 WEST 35TH STREET, CHICAGO, IL 60616, TELEPHONE 312 567-4432) OR WITH KYLON ULTRA FLAT (UF) BLACK \ 1011-B PAINT.
2. MATERIAL UNspecified.
3. ALL DIMENSIONS IN INCHES.
4. DRAWING NOT TO SCALE.

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	91-04-18
T. MOSS	
CHECKED BY	
R. THOMAS	91-04-18
ENG. APPROVAL	DATE
G. REYNOLDS	91-04-18
DGSC APPROVAL	DATE
R. SCHAFFER	91-04-18
MILACT. APPROVAL	DATE

DEFENSE LOGISTICS AGENCY
DEFENSE GENERAL SUPPLY CENTER
RICHMOND, VA 23897-5000

HOLDER, WAND TEST FIXTURE

SIZE CAGE NO. A 13873 DVG. NO. DGSCV-91-03 REV B

SCALE NONE SHEET 1 OF 1

HANDLE SECURED TO TEST STAND (Reference)

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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 46 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 3 1/4 inches.

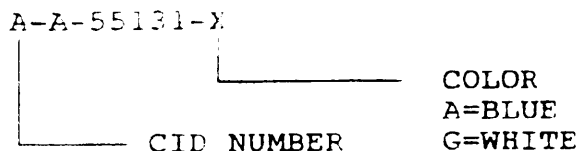
Preservation, packaging, packing, labeling, and marking.

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.



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Notes.

Ordering data. Acquisition documents must specify the following:

a. Title, number, part identification number with applicable color code letter, and date of this document.

b. Material Safety Data Sheet (MSDS) shall be provided to Contracting Officer prior to award (FAR 52.233-3 and MSDS Page 2).

c. Contracting Officer may request proof of certification of commercial item prior to first contract delivery (See Contractor Certification, Page 3).

MILITARY INTEREST:

CIVIL AGENCY COORDINATING ACTIVITY:

MILITARY COORDINATING ACTIVITY:

Custodians

Navy-EC
Air Force-99

GSA-FSS

PREPARING ACTIVITY:

Navy-EC

Reviewing Activities

DLA-GS

AGENT: DLA-GS

User Activities

Navy-YD

PROJECT NO. 6260-1012

FSC 6260