

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES  
SAFETY EVALUATION OF SEALED SOURCE

NO: NR-155-S-112-S

DATE: MAR 8 1983

PAGE 1 OF 1

SOURCE TYPE: Radioluminous Lamp

MODEL: 11733738

MANUFACTURER/DISTRIBUTOR:

Department of the Army  
U.S. Army Armament Material  
Readiness Command (DRSAR-SF1)  
Rock Island, IL 61299

MANUFACTURER/DISTRIBUTOR:

ISOTOPE: Hydrogen-3

MAXIMUM ACTIVITY: 0.8 curies

LEAK TEST FREQUENCY: See License No. 12-00722-06

PRINCIPAL USE: (R) Gas Sources, for use in Model M64 sight unit

DIAGRAM: See Attachments 1 and 2

CUSTOM DEVICE:  X  YES   NO

CUSTOM USER:

U.S. Department of Defense

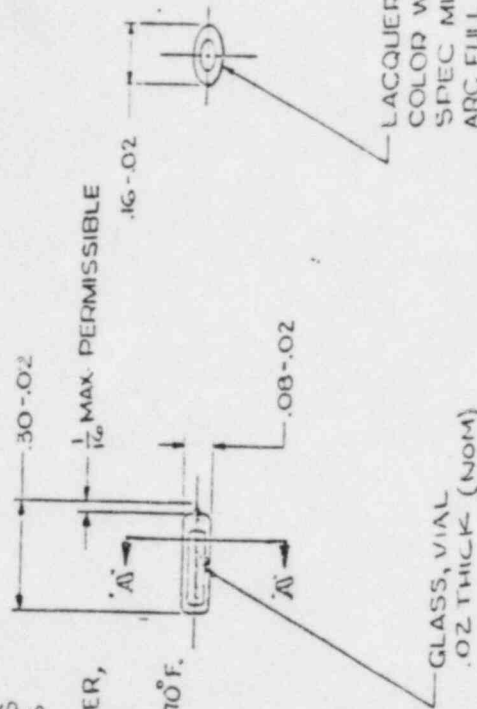
REFERENCES: This registration document was formulated from information contained within U.S. Dept. of Army License No. 12-00722-06.

8403020110 840209  
PDR FOIA  
HAMMIT84-74 PDR

ISSUING AGENCY: U.S. Nuclear Regulatory Commission

1. MATERIAL LABELING AND SHIPPING OF VIALS AND CONTAINERS SHALL BE IN ACCORDANCE WITH MIL-STD-1458.
2. THERE SHALL BE NO EVIDENCE OF PHYSICAL FAILURE SUCH AS FRACTURING OR LIGHT LOSS DUE TO EXPOSING THE LAMP TO SHOCK AND VIBRATION FOR A PERIOD OF 8 HOURS AT EACH TEMPERATURE.
3. AFTER SUBMERGING THE LAMP IN ROOM TEMPERATURE WATER FOR 4 HOURS, RADIOACTIVE CONTENT OF THE WATER SHALL NOT EXCEED .005 MICROCURIE.
4. VIAL TO BE FILLED WITH TRITIUM ( $H_3$ ) OF 94%-96% PURITY.
5. PRIOR TO MAKING BRIGHTNESS MEASUREMENTS, LAMPS SHALL BE ALLOWED TO STABILIZE FOR A PERIOD OF 25 DAYS FROM MANUFACTURE.
6. FOLLOWING THE STABILIZATION PERIOD AND UP TO 120 DAYS FROM DATE OF MANUFACTURE, BRIGHTNESS MEASUREMENTS SHALL NOT SHOW A DECAY IN EXCESS OF 2.5 % WHEN MEASURED OVER ANY CONSECUTIVE 30 DAY PERIOD. FURTHER, THE FINAL BRIGHTNESS MEASUREMENT AT TIME OF ACCEPTANCE SHALL BE 325 MICROLAMBERTS MINIMUM.
7. INTERNAL PRESSURE 2.50 ATMOSPHERES (NOMINAL) AT  $+70^{\circ}F$ .
8. COLOR OF PHOSPHOR: GREEN.  
SPECTRAL PEAK  $5250 \text{ Å} \pm 50 \text{ Å}$ ,  
 $\frac{1}{2}$  PEAK WIDTH  $700 \text{ Å} \pm 50 \text{ Å}$ .

SOURCE USED ON:  
M64 Sight Unit  
(Scale Indices, Mount)



LACQUER, ACRYLIC,  
COLOP WHITE NO.17875,  
SPEC MIL-L-8152 (180°  
ARC FULL LENGTH) OF VIAL,  
APPLY TWO COATS (MIN).

## SECTION A-A

U S ARMY ARMAMENT INVENTORY  
SCHEMATIC INFORMATION  
SCHEMATIC INFORMATION

PART No. 11733738

APPLICABLE DOCUMENTS  
SQAP 11753738

[illegible]

|                                                        |                                                        |                                                        |
|--------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| ORIGINAL<br>DATE 7-4 MAR 11                            | CLASSIFIED BY T-3                                      | DECLASSIFY ON DATE                                     |
| GROUP 1                                                | GROUP 1                                                | GROUP 1                                                |
| EXEMPT FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION | EXEMPT FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION | EXEMPT FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION |
| APPROVED BY M. S. G. 11-11-11                          | APPROVED BY M. S. G. 11-11-11                          | APPROVED BY M. S. G. 11-11-11                          |

[illegible]

|           |                                          |
|-----------|------------------------------------------|
| APPROVED  | <i>E. B. Linder</i>                      |
| SUBMITTED | <i>M. L. P. &amp; Co. Inc. &amp; Co.</i> |

# LAMP, RADIOLUMINOUS

|      |                |                      |
|------|----------------|----------------------|
| 1271 | DATE REC'D NO. | 10000000000000000000 |
| C    | 19200          | 11733738             |

| SUGGESTED SOURCE(S) OF SUPPLY |               | VENDOR | VENDOR PART NO. |
|-------------------------------|---------------|--------|-----------------|
| MERC & BENETEL                | NOT AVAILABLE |        |                 |
| NUCLEAR PG                    | NOT AVAILABLE |        |                 |
| PREPULSE/SE G24               | NOT AVAILABLE |        |                 |
| CL-3072-HEDERWANGEN           | NOT AVAILABLE |        |                 |
| SWITZERLAND                   | NOT AVAILABLE |        |                 |
| SELF POWERED                  | NOT AVAILABLE |        |                 |
| LIGHTING LTD                  | NOT AVAILABLE |        |                 |
| CODE IDENT NO. 29216)         | NOT AVAILABLE |        |                 |
| 8 WILCHESTER PLAIN            | NOT AVAILABLE |        |                 |
| ELIASFORD, NY 10523           | NOT AVAILABLE |        |                 |
| SAUNDERS-ROE                  | NOT AVAILABLE |        |                 |
| DEVELOPMENTS LTD.             | NOT AVAILABLE |        |                 |
| MILLINGTON ROAD               | NOT AVAILABLE |        |                 |
| WATTS MIDDLESEX               | NOT AVAILABLE |        |                 |
| UB3 4NB ENGLAND               | NOT AVAILABLE |        |                 |
| FRANKTHURST CO LTD.           | NOT AVAILABLE |        |                 |
| P.O. BOX 70                   | NOT AVAILABLE |        |                 |
| HIGH WYCOMBE                  | NOT AVAILABLE |        |                 |
| BUCKINGHAMSHIRE               | NOT AVAILABLE |        |                 |
| HP12-3PS ENGLAND              | NOT AVAILABLE |        |                 |

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ELBOW TELESCOPE  
RETICLE  
SOURCE#11739555

FINE AZIMUTH SCALE  
SOURCE#11733744-2

*SOURCE*  
SCALE INDICIES (4)  
SOURCE#11733736

FINE ELEVATION  
SCALE  
SOURCE#11733744  
-1

COURSE ELEVATION  
SCALE  
SOURCE#11733737

LEVEL VIALS  
SOURCE#11729510-1

COURSE AZIMUTH SCALE  
SOURCE#11733736

Sightalt: 150