

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

NO: NR-155-S-113-S

DATE: MAR 8 1983

PAGE 1 OF 1

SOURCE TYPE: Radioluminous Lamp

MODEL: 11733744-1 or 11733744-2

MANUFACTURER/DISTRIBUTOR:

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

MANUFACTURER/DISTRIBUTOR:

ISOTOPE: Hydrogen-3

MAXIMUM ACTIVITY: 0.7 curies (11733744-1)
1.0 curies (11733744-2)

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

CUSTOMER: 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.

8403020114 840209
PDR FOIA
HAMMITT84-74 PDR

ISSUING AGENCY: U.S. Nuclear Regulatory Commission

1. MARKING, LABELING, AND SHIPPING OF PACKAGES AND CONTAINERS SHALL BE IN ACCORDANCE WITH MIL-STD-145B.
2. THERE SHALL BE NO EVIDENCE OF PHYSICAL FAILURE SUCH AS FRACTURING OR LIGHT LOSS DUE TO EXPOSING THE LAMP TO -80°F AND $+160^{\circ}\text{F}$ FOR A PERIOD OF 8 HOURS AT EACH TEMPERATURE.
3. AFTER SUBMERGING 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 A MINIMUM OF (SEE TABULATION).
7. COLOR OF PHOSPHOR: GREEN SPECTRAL PEAK $5250\text{\AA} \pm 50\text{\AA}$, .16 DIA. - $\frac{1}{2}$ PEAK WIDTH $700\text{\AA} \pm 50\text{\AA}$.

SUGGESTED SOURCE(S) OF SUPPLY	
VENDOR	VENDOR PART NO.
SELF POWERED LIGHTING LTD CODE IDENT NO. 29218 8 WESTCHESTER PLAZA ELMSFORD, N.Y. 10523	NOT AVAILABLE
LAUNDERS-ROE DEVELOPMENTS LTD. MILLINGTON ROAD HAYES MIDDLESEX UB3 4NB ENGLAND BRANDHURST CO. LTD. P.O. BOX 70 HIGH WYCOMBE BUCKINGHAMSHIRE HP12-3PS ENGLAND	NOT AVAILABLE
MERC + BENTEL NUCLEAR AG FREIBURTSTRASSE 624 CH-3172-NIEDERWANGEN SWITZERLAND	NOT AVAILABLE

PART NO.	ACTIVITY CURIES MAX	BRIGHTNESS MICROLAMBERTS	INTERNAL PRESSURE AT +70°F	"A" ± 5°
11733744-1	0.7	400 MIN	2.50 ATM (NOM)	113°
11733744-2	1.0	500 MIN	2.50 ATM (NOM)	174°

M64 Sight Unit
(Scale, Fine Elevation
and Azimuth, Mount)

PAINT, EPOXY SPEC. MIL.
P-47115, TYPE 1 COAT VIAL.
NO. 17875 OF FED-STD 595.
(180° ARC FOR FULL LENGTH
OF VIAL, APPLY TWO COATS/MIL.)

SECTION 1A-1A

-GLASS, VIAL
.03 THICK (NOM)

SPECIFICATION CONTROL DRAWING

U S ARMY AIRBORNE RESERVE & DEVELOPMENT COMMAND
FOURTH AIRBORNE DIVISION

PART No (SEE TABULATION)

20. EXAMINATION BY WEAPONS 21. FBI 22. ELR 23. SA 24. DET 25. SGT		26. CH733745 MT ILSCP 27. CH733746 MT ILSCP 28. SEE ENGINEERING RECORDS 29. MEET ASSE 30. APPLICATION 31. NO NOT 32. APPLY IDENTIFICATION 33. PER MIL-810-450		34. UNLESS OTHERWISE SPECIFIED 35. DIMENSIONS ARE IN INCHES 36. TENSILE STRENGTH 37. DECOMPOSED 38. MATERIAL 39. NEW TREAT 40. EFFECTIVE TREAT		41. DATE 74 MAR 11 42. UNIT 4C 43. TRACES 44. ENCL 45. DATE TITLED 46. APPROVED 47. SIGNATURE		48. LAMP 49. RADIOLUMINOUS 50. TANK NO 19200 51. SERIAL NO 11733744 52. UNIT MT 53. UNIT	
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ELBOW TELESCOPE
RETICLE
SOURCE#11739555

FINE AZIMUTH SCALE
SOURCE#11733744-2

Sources
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

Sight: 150