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Project 02NK12614

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REPORT

on

FLASHLIGHTS AND LANTERNS FOR USE IN HAZARDOUS LOCATIONS

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Torrance, CA

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## DESCRIPTION

## PRODUCT COVERED:

**USL - Model 2640 headlamp for Class I, Division 2, Groups A, B, C and D Hazardous Locations.**

## GENERAL:

The products covered are flashlights that contain a bulb and LEDs, and are powered by four 1.5 V size "AA" alkaline batteries. See ILL. 1 for an exploded view of the device.

## ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

**USL, indicates investigation to U.S. Standards UL 1604, Third Edition and UL 783, Sixth Edition.**

## MARKING:

The following markings are provided on each device. See ILL. 2.

1. Listee's name and model number.
2. Catalog number.
3. Designation of the hazardous locations as shown in "Product Covered".
4. The designation of the lamp bulb to be used and the number, type, and size of batteries to be employed.
5. Temperature Code T3.

## MODEL 2640 - FIG. 1

1. Battery Pack - ABS. Consists of a body, contacts, and a cover that is held on by a screw. Is connected to the headlamp assembly by a cord with a plug that is inserted into the body of the headlamp assembly. See ILLS. 3 and 4 for shape and dimensions.
2. PCB Board - Contains the three Part No. NSPW500S LEDs and lamp contacts along with the components that are found in the schematic in ILL. 5.
3. PCB Housing - ABS. Secures the position of the LEDs and the lamp and houses the PCB. Also contains the contact connection from the batteries.
4. Lamp - Cat. No. 2644 halogen bulb rated 6.0 V and 0.58 A. The lamp leads fit into two holes that are in the PCB housing. There is a plastic tab that runs between these two holes and keeps the leads separated. The tab, along with the leads, are then inserted into the metal lamp contacts that are found on the PCB board to assure that the lamp is secured.
5. Body - ABS. See ILL. 6 for shape and dimensions.
6. Reflector - ABS. Fits into the PCB housing and over the LEDs and lamp.
7. Lens - Polycarbonate. Approximately .099 in. thick and 2.298 in. in diameter. Screws onto the body. See ILL. 7 for shape and dimensions.
8. Shroud - TPR. Molded over the lens. See ILL. 7 for shape and dimensions.