



Downing

HELIPORT FLUSHLIGHT Model 1601



INSTALLATION INSTRUCTIONS AND TECHNICAL MANUAL



HELIPORT FLUSHLIGHT Model 1601

TECHNICAL MANUAL

FUNCTION, DESCRIPTION and SPECIFICATION INSTALLATION INSTRUCTION and MAINTENANCE

GENERAL

The Flushlight, Model 1601 was designed as a fixture that would be flush mounted (recessed) into the surface of the landing area. It may be used to assist in the outlining of the area with yellow perimeter lights as well as providing marking in the landing area itself, such as a line of lights, either yellow or clear, across the surface, as a directional guide for landing. The light output is 60 watts and it is powered by 120 VAC or 220/240 VAC.

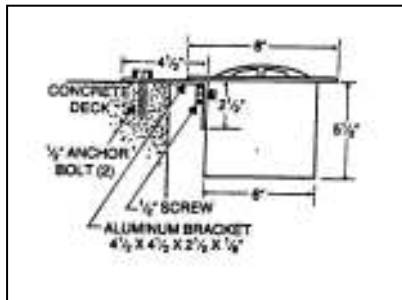
THEORY OF OPERATION

The fixture when installed and recessed extends about 3/4" above the surface level. It provides 360 degrees of light illumination through an optically designed non breakable LEXAN (plastic) lens which is available in yellow, clear, blue or green. The lens is protected by a heavy cast aluminum cover guard in the form of an open grid permitting light emission. The guard is strong enough to permit some vehicular support capability. It is available with either 3 spokes (as in a wheel), to permit maximum light transmission and to be used where minimum heavy vehicular traffic is contemplated, or with 6 spokes where more strength is required. It is machined to fit into a heavy cast aluminum housing that is recessed below the surface. The fixture is often located where surface obstruction should be at a minimum.

APPLICATION

- A. To be used as a low level **Perimeter Light**.
- B. To be used as a line of **Directional Landing** Lights across the center of the landing area, front to back.
- C. To be used as added **Threshold Lights** across the **front edge** of the landing area.

INSTALLATION INSTRUCTIONS



The installation of the fixture requires that it be watertight. The underground wiring and conduit need to be watertight so that no moisture can reach the inside and damage the fixture.

The fixture, when located where desired, should be installed so that the outer surface edge of the flange is level with the poured aggregate or earth. If desired, holes having 3/8" diameter may be drilled through the flange in the corner sections and anchor bolts may be inserted to penetrate the concrete before pouring.

To install the Flushlight on the edge of a concrete or other type of helideck, it may be held in place with an angle bracket. Drill and tap 2 holes (1/2") on the flat boss located under the flange. Dimensions should be 3" on centers and 3/8" up from the bottom. An angle bracket with matching clearance holes would then be anchor-bolted to the top outer edge of the helideck. The fixture is then installed in place with two 1/2" x 5/8" hex head screws.

After the installation is completed, be sure that all electrical connections are secure and that the lamp is installed in its socket.

Place the plastic lens down upon the flat lens gasket and press it down through the tight fitting "O" ring gasket. Be sure that the round rubber cushion is either on the center of the lens or in the center of the cover guard before placing the cover guard over the lens. Pressure the guard down and into place. Now secure the guard with the three 1/4-20 x 3/4 " inch screws.

POWER

The Model 1601 is normally powered by 120 VAC, but may be ordered with 240 VAC at a slightly higher cost. The lamp provides 60 watts (maximum recommended) at 120 volts and should operate for approximately 2000 hours.

The housing is drilled and tapped for a 1/2" pipe thread to accept watertight conduit or a watertight cord grip where the electrical cable enters the fixture.

MAINTENANCE

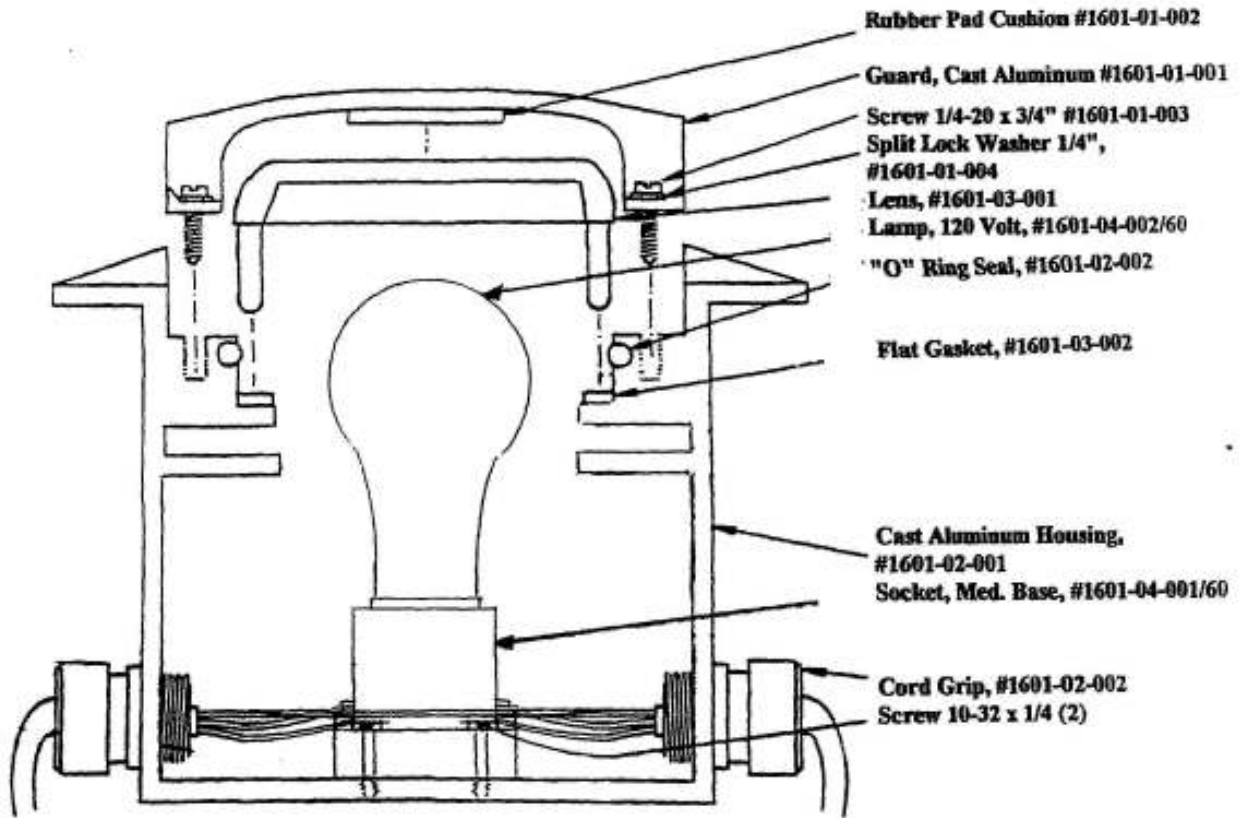
Aside from lamp replacement, very little maintenance should be required. Extra care must be taken to prevent moisture from entering the fixture and damaging it. Always be sure that all the gaskets and cushions are in place when servicing and replacing lamps. It is recommended that the lens gasket (P/N 1601-03-002) be replaced each time the lens is removed.

To replace the lamp, remove the three cover guard screws then pry the lens up with a screw driver to expose the lamp. Install the new 60 watt lamp. Before replacing the lens, be sure that the surface of the lens gasket and the "O" Ring are clean and preferably lubricated with rubber lubricant. When the cover guard is pressured and screwed into place, the top cushion should be slightly compressed.



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FLUSHLIGHT CUT AWAY DRAWING MODEL 1601



PARTS LIST

<u>Part Description</u>	<u>#Required</u>	<u>Part Number</u>
Cover Guard, 6 Spoke	1	1601-01-001/6
Cover Guard, 3 Spoke	1	1601-01-001/3
Cover pad, cushion	1	1601-01-002
"O" Ring Gasket	1	1601-02-002
Lens, LEXAN □ Yellow, Clear, Blue, Green	1 □	1601-03-001 Y,C,B,G
Lens Gasket	1	1601-03-002
Lamp, Med Base, 60 watt	1	1601-04-002/120V Alt. 1601-04-002/230V
Socket, Med Base, Porcelain	1	1601-04-001P
Housing, Cast Aluminum	1	1601-02-001
Cord Grip	2	1601-02-003
Screw, 1/4"-20 x 3/4"	3	1601-01-003
1/4 Split lock washer	3	1601-01-004
1/4 Flat washer	3	1601-01-005
Screw, #10-32 x 1/4"	1	1601-04-003
Screw, #8-32 x 3/4"	2	
Spade Lug	6	
Power Cord	2	

WARRANTY

THE HELIPORT FLUSHLIGHT, MODEL 1601 IS WARRANTED AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR BUT NOT AGAINST MISUSE OR IMPROPER INSTALLATION OR OTHER.