



**ESSEX ELECTRO
ENGINEERS, INC.**

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**TECHNICAL DATA SHEET
PORTABLE FLOODLIGHT SET
MODEL NO. A827A
PAGE 1 OF 3**

COGNIZANT SERVICE: U.S.A.F.

NATIONAL STOCK NUMBER:

OVERALL DIMENSIONS AND WEIGHT:

**Height: 78 Inches (floodlights retracted)
144 Inches (floodlights extended)**

**Length: 89-1/4 Inches (towbar stowed)
151 Inches (towbar extended)**

Width: 68 Inches

Weight (Dry): 1,950 Lbs.



FUNCTIONAL DESCRIPTION:

The Essex Electro Engineers, Inc., Model A827A Portable Floodlight Set is intended for use in night maintenance of aircraft, loading and unloading of aircraft cargo, and for emergency lighting.

The Model A827A Portable Floodlight Set is a mobile unit equipped with two floodlights, mounted on a hoist (retractable tower). The major components of the floodlight set are: (1) a hoist unit, (2) a body and base assembly, (3) a gasoline engine driven generator unit, and (4) a running gear assembly. The hoist unit is mounted on the body assembly. The body and base assembly encloses the engine-gen-

erator unit, an instrument panel, and all accessory equipment. The body-base assembly is mounted on the running gear assembly so that the entire floodlight set is mobile. There is an auxiliary outlet receptacle connector provided to power accessory equipment when the floodlight set is in operation.

Two mercury vapor floodlights are mounted on the upper section of the hoist unit and supply a combined total of 45,000 lumens of illumination. The floodlights can be swiveled around the horizontal and vertical axes. Each light consists of a water-



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proof housing, a wide beam reflector, a socket assembly, a 400-watt lamp, and a heat-resistant glass lens. A bracket supplied with each light provides support and allows for mechanical adjustment.

The hoist unit supports the floodlight in retracted, extended or intermediate positions.

The hoist unit consists of a top frame assembly with a junction box and floodlight mounting provisions, scissor-type support legs, hinges, mounting tracks, and an actuator screw assembly. The hoist unit is track mounted on top of the body-base assembly. A manually operated hand-crank is provided for extending and retracting the top frame assembly.

The body assembly is mounted over the base frame of the floodlight set and provides protection for equipment located within. The body assembly is of welded and bolted construction.

Access doors are provided to facilitate servicing. The base, which is mounted on the running gear assembly, is of welded construction. The base assembly has four tie-down rings by which the entire floodlight set can be lifted and secured during shipment. It incorporates a rack for stowage of lights.

The engine generator assembly is mounted on the base assembly and supplies DC power for recharging of the storage battery. The generator unit also supplies power, through an external power outlet receptacle connector for operation of accessory equipment.

The control panel is located on the aft end door of the floodlight set. The control panel consists of all necessary switches, meters, and connectors to operate the floodlight set.

The running gear provides support and mobility for the floodlight set. The running gear is equipped with four wheels with pneumatic tires. The floodlight set is equipped with mechanical brakes and a tow bar.

TECHNICAL DESCRIPTION:

FLOODLIGHTS:

- Lens Glass, Heat Resistant
- Lamps Mercury Vapor
- Power Requirement 445 Watts
(each lamp-including ballast)
- Output per Lamp 22,500 lumens -
- Light Spread 140 degrees (Lateral), 120 degrees (Vertical)
- Light Distribution 180 degrees (Vertical Axis), 350 degrees (Lateral Axis)

ENGINE/GENERATOR ASSEMBLY:

ENGINE:

- Type Two cylinder, four-stroke, air-cooled, overhead valve
- Governor Flyball Type
- Oil pump Gear Type



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ENGINE (continued)

Air Cleaner Dual Element
Fuel:
 Type Gasoline
 Minimum Rating 74 octane
 Tank Capacity 9-1/2 gallons
 Cylinder Sleeve Cast Iron
Electric Start and
Battery Charger 12VDC

GENERATOR:

Type Brushless, 2-pole, revolving field
Wattage 4,300 Watts
Voltage 120/240 AC
Phase Single
Cycles 60
Speed at rated output 3,600 RPM

PROTECTIVE DEVICES Low engine oil pressure automatic shutdown, reverse current protection relay or diode

BATTERY:

Rating 12 VDC

RUNNING GEAR:

Wheel Base 54 inches
Track 60 inches
Ground Clearance 4-1/2 inches
Minimum Turning Radius 123 inches

TIRES:

Inflation Pressure 40 ± 5 psig (paved roads), 30 psig (unpaved roads)