



**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)