

Nightsun[®] XP

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High Intensity Searchlight System



Key Specifications & Characteristics:

- 30-40 Million Candlepower Peak Beam Intensity,
- 1600 Watt Xenon Short Arc Lamp
- 3,280 ft. (1 km) Typical Range
- 30 Lux (2.8 ft.-cd) Peak Illuminance @ 1 km
- Beam Width = 4° to 20° bi-directional focus
- Diameter of Beam at 10% Peak Illuminance =
 - 230 ft. (70m) wide @ 3,280 ft. (1 km)
- Azimuth Rotation 344° Maximum
- Elevation Range: +14° to -74° ($\pm 1^\circ$)
- Variable Slew Rate 0° - 90° in Az and El.

Applications

Air, Land, and Maritime applications in Law Enforcement, Fire, SAR, and EMS operations requiring best in class support, reliability, and long range illumination.

System Description:

This 1600 Searchlight is our flagship commercial model, offering an aerodynamic and rigid design for streamline performance and stability. Internally, the Nightsun[®] XP uses computer controlled ultra high speed motors for precise maneuverability with increased control functionality, and integration with popular mission system and camera sensor linking capabilities. Additionally, the Nightsun[®] XP offers optional Console Control Panel and Side Car Controllers for configuration alternatives that meet your operation requirements. The has flown on several dozen platforms, making it the most highly flown 1600 Watt searchlight, world wide.

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Illumination Specifications

Lamp Type	1600 Watt Xenon Gas Arc Lamp
Peak Candle Power	40,000,000 (MCD)
Nominal Candle Power	30,000,000 (MCD)
Lux	32 Lux (3.7 ft.-cd) Peak Illuminance @ 1 km
Lumens	1.9M
Beam Diameter 10% Peak Illuminance	230 ft. wide @ 3,280 ft. 70 m wide @ 1 km
Focus Range	Variable 4° to 20° (Beam Width)
Typical Useful Range	1 mile., 1.6 km

Electrical / Interface Specifications

Input Voltage	28 Volts DC, Nominal
Input Current	65 Amperes, 70 Amp Max < 3 Amperes in standby
System Control Interface	<ul style="list-style-type: none"> • System Aux On/Off <ul style="list-style-type: none"> • Cooling • Directional Control • Lamp on/off • Two-way focus (zoom +/-) • Link/Slave, Cage, Stow, • Variable Slew Rate via pressure sensitive joystick
Start Time	3 – 5 seconds
Slew Rate	Variable= 0° - 90° / sec max

Mechanical Characteristics

Searchlight & Gimbal Weight	55 lbs. (24.9 kg)
Junction Box Weight	6.1 lbs. (2.8 kg)
Control Box Weight	1.5 lbs.. (.07 kg)
Cable Set Weight	10 – 25 lbs. (4.5 – 11.33 kg)
System Weight	72 lbs. min (32.65 kg)



Envelope Specifications

Searchlight & Gimbal Assy.

Min Height	19.87" (504 mm)
Max Height (90° look down)	24.52" (622 mm)
Max Depth	21.87" (553 mm)
Max Width	12.09" (307 mm)
Azimuth Rotation Diameter	12.84" (128 mm)

Junction Box Assy.

Height	5.4" (137 mm)
Depth	8.5" (215 mm)
Width	6.3" (160 mm)

Control Box Assy.

Height	8.89" (225 mm)
Depth	4.12" (104 mm)
Width	3.09" (78 mm)

Reference Documents

Document Title	Document Number
System Cabling Diagram	033401 033507-OEM
Envelope Drawings	033405-OEM 033365 034363
Operation Manual	032566
Schematics	033144