

Nightsun® XP IR LED Searchlight System

SPECTROLAB
A Boeing Company



Spectrolab's flagship Searchlight model introduces new Infrared (IR) LED technology into a sleek aerodynamic package.

The XP makes use of software to adjust slew rate, keep-out zones, stow and cage positions, and linking to some of the most widely used camera systems.

The new IR LED Ring offers infrared illumination for use with Night Vision Goggles (NVG's). A ring of high power IR LED's offer wide or narrow focus modes while reducing power consumption by 79% and weight by 20% (compared to our original IFCO filter configuration). Visible white light remains intense with the use of the legacy 1600 Watt Xenon Arc Lamp. This combination of technologies provides the operator with the best airborne searchlight in both visible white light and invisible infrared operating environments.

Key Features & Characteristics:

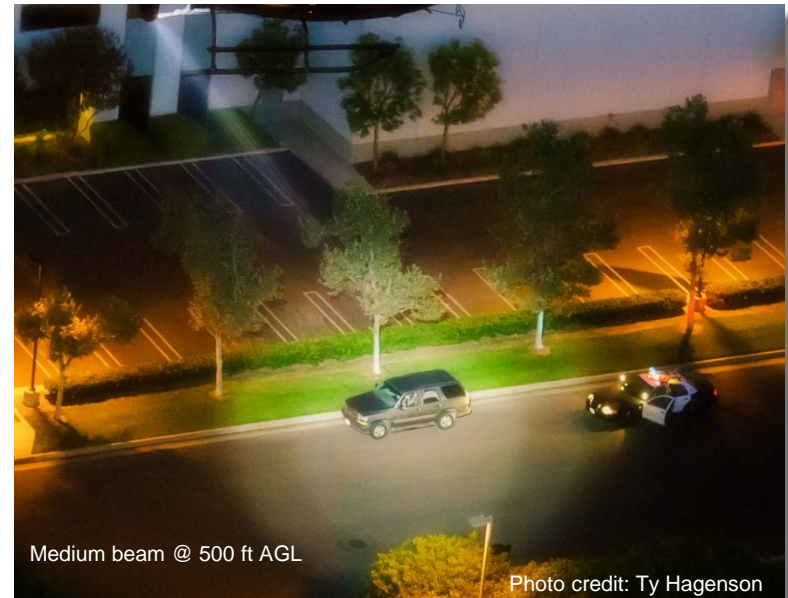
- Brightest & broadest focusable beam on target at high altitudes
- Instant mode change between visible white light and IR light.
- Integrated Linking with E/O Sensors & Moving Map Systems.
- Multiple control input options
- Versatile & reliable system
- Over 10 years of flight heritage
(Nightsun XP)

Exceptional Product Support:

- Pioneer in Airborne Searchlights since 1967
- World-wide customer support & presence



Mil-Spec qualified
Nightsun® XP Console Control Panel
(optional)



Medium beam @ 500 ft AGL

Photo credit: Ty Hagenson

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Visible Illumination Characteristics:

- Light Lamp Type: 1600 Watt Xenon Short-Arc
- Peak Beam Intensity: 30-40 Million Candlepower
- Focus Range: 4° (narrow) - 20° (wide)
- Focus Control: Bi-directional

Performance Characteristics:

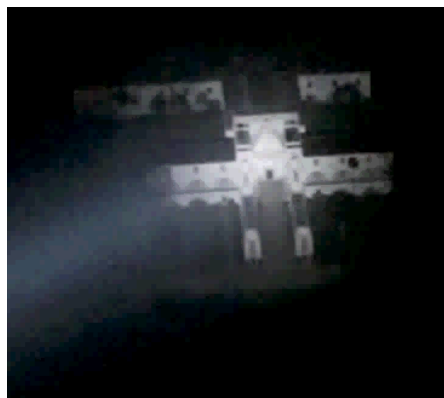
- Typical Range: 3300 ft (1km)
- Target ID Range: 1 Mile (1.6km)
- Peak Illumination: 32 lux (2.9 ft.cd) @ 1km
- Beam Diameter at 10% of Peak Illumination: 230 ft @ 330 ft (70m @ 1km)

Non-visible (IR) Illumination Characteristics:

- Light Lamp Type: 10 Watt High Power LED
- Focus Modes: 14° (narrow) / 40° (wide)
- Dimming: 0% - 100%

Gimbal Characteristics:

- Azimuth Rotation: 334°
- Elevation Range: +2° to -74° (+/1°)
- Elevation Slew Rate: 0-90° / sec (programmable)
- Azimuth Slew Rate: 0-90° / sec (programmable)



Nightsun XP in wide focus @ 1,200 ft.



Competing searchlight (800 Watt) in wide focus @ 750 ft.



IR LED Test Zone (farm field reservoir)



IR LED Test Zone through NVG's (field reservoir illuminated @ 500 ft AGL)



IR LED Test Zone through NVG's (field reservoir illuminated @ 1,500 ft AGL)



IR LED Test Zone through NVG's (field reservoir **NOT** illuminated @ 1,500 ft AGL)



Nightsun XP wide beam

competing searchlight wide beam

Beam diameter vs. intensity