Elevated Aeronautical Ground Light

EAGLE

Features

- Over 50hrs of continuous operation at FAA non precision MIRLs per AC/150-5345-46D L861 without solar or auxiliary charge
- Integrated and replaceable Solar Panels - Enables continuous operation
- NVG Mode - Illumination invisible to naked eye to support covert operations
- Worldwide 2.4GHz Encrypted RF Radio Control - Secure control of all operational modes from anywhere on the airfield
- *AvMesh®* integrated Mesh Network - Each light is a receiver/transmitter to expand communication range
- Radio Transceiver - Internal to light head, no external antenna
- Auxiliary Charging System - Redundant power system to accommodate high use demands or insufficient solar conditions
- On-board Diagnostics - Monitor battery charge level and identify over-use conditions
- Fault Detection - Detects LED failures, cable power faults & weak batteries
- Environmental - Waterproof to IP68 standards
- Modes of Operation - Programmable lighting groups, dusk-till-dawn operation, adjustable intensity, worldwide ISM use frequency

The EAGLE is the most advanced hybrid airfield lighting solution ever to be fielded in the industry and is the result of a teaming effort between Avlite Systems and Sierra Nevada Corporation (SNC). SNC is a world-class prime systems integrator and electronic systems provider known for its rapid, innovative and agile technology solutions.

The Avlite / SNC EAGLE are deployable solar runway lights for VFR and non-precision IFR lighting requirements. EAGLE runway lights can be used autonomously or as part of a complete portable solar airfield lighting system providing auxiliary power and a master control unit with extensive diagnostic and fault detection capabilities. The EAGLE can also be operated from the ALSCMCU (airfield lighting system master control unit).

The EAGLE has non-precision IFR and VFR capability with both visible and near infrared lighting outputs. The airfield lights can be controlled anywhere in the airfield by handheld radio controller, in the air traffic control tower or from the aircraft via VHF receiver with virtually unlimited range using an encrypted repeating mesh network. The EAGLE has three selectable modes; always on, dusk-till-dawn and standby. When set to dusk-till-dawn mode, integrated sensors in the light are able to detect when the ambient light threshold drops sufficiently and the light will begin operation automatically.

There is significant value in rapid installation for non precision IFR operations in areas of no infrastructure. When in High Intensity Mode the lights can run for over 40 hours before recharging of the battery is needed. If requirements exceed 40 hours of operation at IFR capable high intensity output, high voltage power cables can be attached to the EAGLE allowing for continuous operations at any intensity. A high voltage direct connection to the EAGLE allows for redundant power, quick battery recharge during operation and the added level of safety of not having a single point of failure in the entire system.

Lights can be set to Low (10%), Medium (30%), High (100%).

Lights are able to be assigned to a 'light group', and groups can be controlled independently using the wireless handheld controller.



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V3_2013

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SPECIFICATIONS • *	EAGLE
Light Characteristics	
Light Source	16 ultra-high intensity LEDs
Available colors	Red/Green/IR, White/Amber/IR, White/IR
Peak Intensity (cd)†	Steady-on: Red - 25.0 Green - 370.0 White - 275.0 Yellow - 92.5
Horizontal Output (degrees)	As per L861 and L861E
Vertical Divergence (degrees)	As per L861 and L861E
Intensity Adjustments	Low (10%), Medium (30%), High (100%)
LED Life Expectancy (hours)	>100,000
Electrical Characteristics	
Circuit Protection	Integrated
Operating Voltage (V)	12
Temperature Range	-40 to 55°C
Solar Characteristics	
Solar Module Type	Multicrystalline
Output (watts)	17
Solar Module Efficiency (%)	14
Charging Regulation	Microprocessor controlled
Power Supply	
Battery Type	SLA (Sealed Lead Acid)
Battery Capacity (Ah)	20
Nominal Voltage (V)	12
Autonomy - FAA Optic (hours)	Steady-on: Low intensity: >320 hours Medium intensity: >130 hours High intensity: >50 hours
Physical Characteristics	
Body Material	7-stage powder-coated aluminium
Lens Material	LEXAN® Polycarbonate – UV stabilized
Lens Diameter (mm/inches)	155 / 6 1/8
Lens Design	16 segment, multi-focus lens (Patents pending)
Mounting	4 hole 200mm bolt pattern
Height (mm/inches)	470 / 18½
Width (mm/inches)	233 / 9¼
Mass (kg/lbs)	13.8 / 30½
Product Life Expectancy	Up to 12 years
Environmental Factors	
Humidity	0 to 100%, MIL-STD-810F
Icing	22kg per square inch
Wind Speed	Up to 160kph (300mph)
Shock	MIL-STD-202G, Test Condition G, Method 213B
Vibration	MIL-STD202G, Test Condition B, Method 204
Certifications	
CE	EN61000-6-3:1997. EN61000-6-1:1997
Quality Assurance	ISO9001:2008
Intellectual Property	
Patents	Patents pending
Trademarks	AVLITE® is a registered trademark of Avlite Systems
Warranty *	1 year warranty
Options Available	• Avlite Pilot Activated Lighting Control

• Specifications subject to change or variation without notice

* Subject to standard terms and conditions

† Intensity setting subject to solar availability

CE

Typical Applications

- Solar Runway Edge Light
- Solar Threshold Light
- Approach
- Solar Caution Light
- Helipad
- Tactical

Compliance

- Designed to meet photometrics for ICAO Annex 14 Volume 1, 'Aerodrome Design and Operations'. Runway Edge - paragraph 5.3.9. Appropriate for use as threshold - paragraph 5.3.10, 5.3.11 threshold light or end light Approach - paragraph 5.3.4.1A & B, 5.3.4.8 simple approach lighting system
- Designed to meet photometrics for FAA AC/150-5345-46D L861 (High Intensity Mode)

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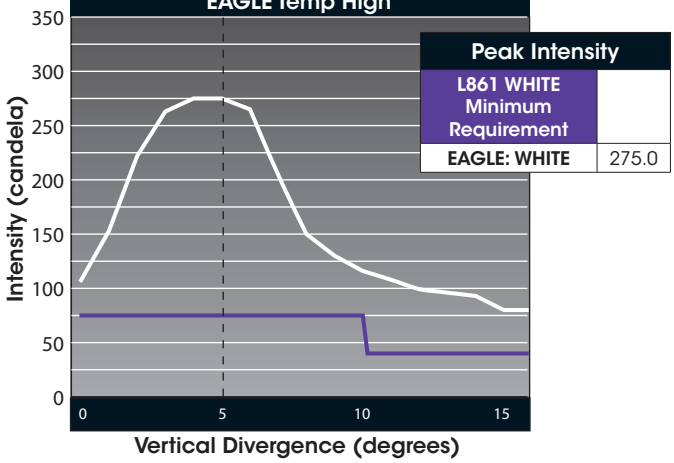
WHITE

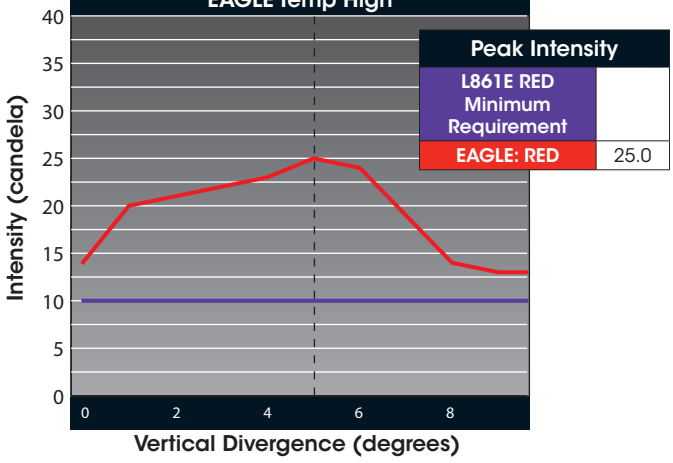
Average Photometric Output:
EAGLE Temp High



Peak Intensity	
L861 WHITE Minimum Requirement	
EAGLE: WHITE	275.0

RED

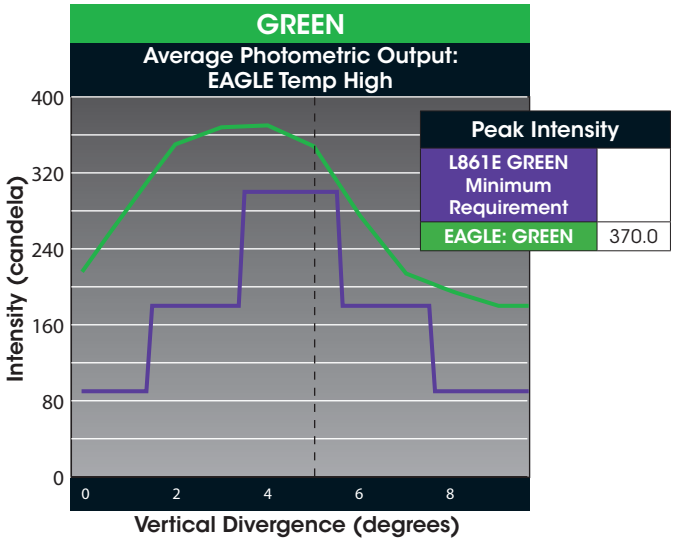
Average Photometric Output:
EAGLE Temp High



Peak Intensity	
L861E RED Minimum Requirement	
EAGLE: RED	25.0

GREEN

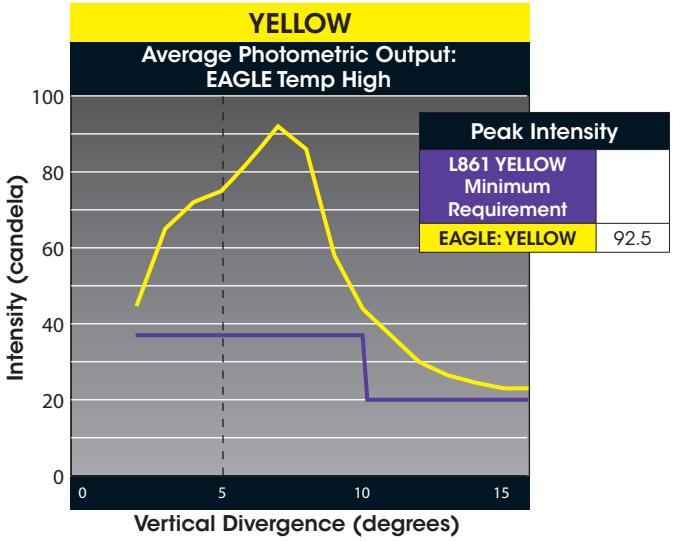
Average Photometric Output:
EAGLE Temp High



Peak Intensity	
L861E GREEN Minimum Requirement	
EAGLE: GREEN	370.0

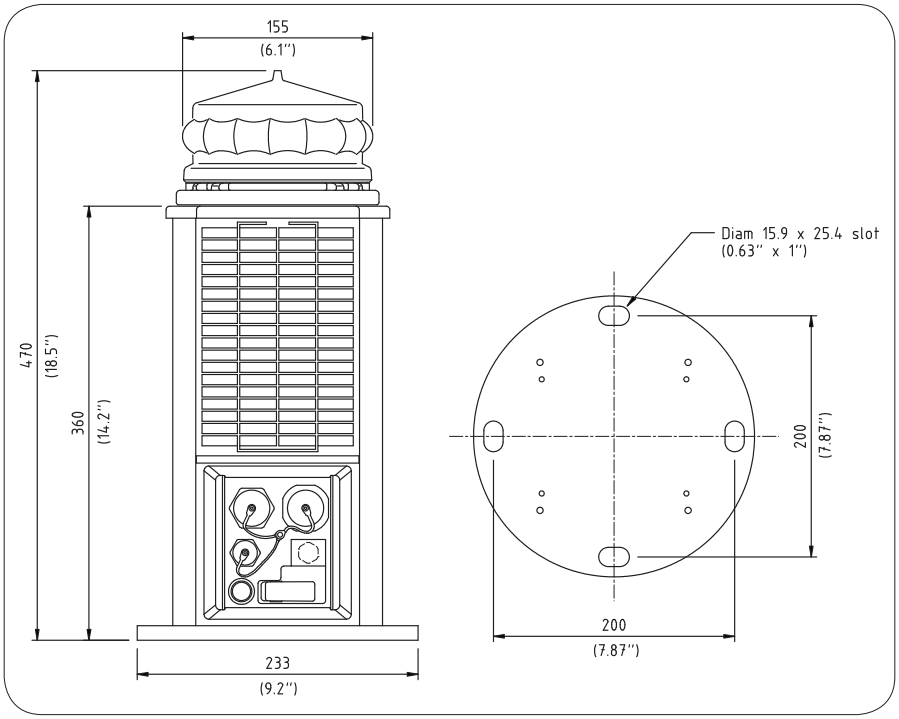
YELLOW

Average Photometric Output:
EAGLE Temp High



Peak Intensity	
L861 YELLOW Minimum Requirement	
EAGLE: YELLOW	92.5

Note: The figures shown in the above graphs are for 100% (Temp High) Mode



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