

Radio Controlled Solar Aviation Light

AV-425-RF

Features

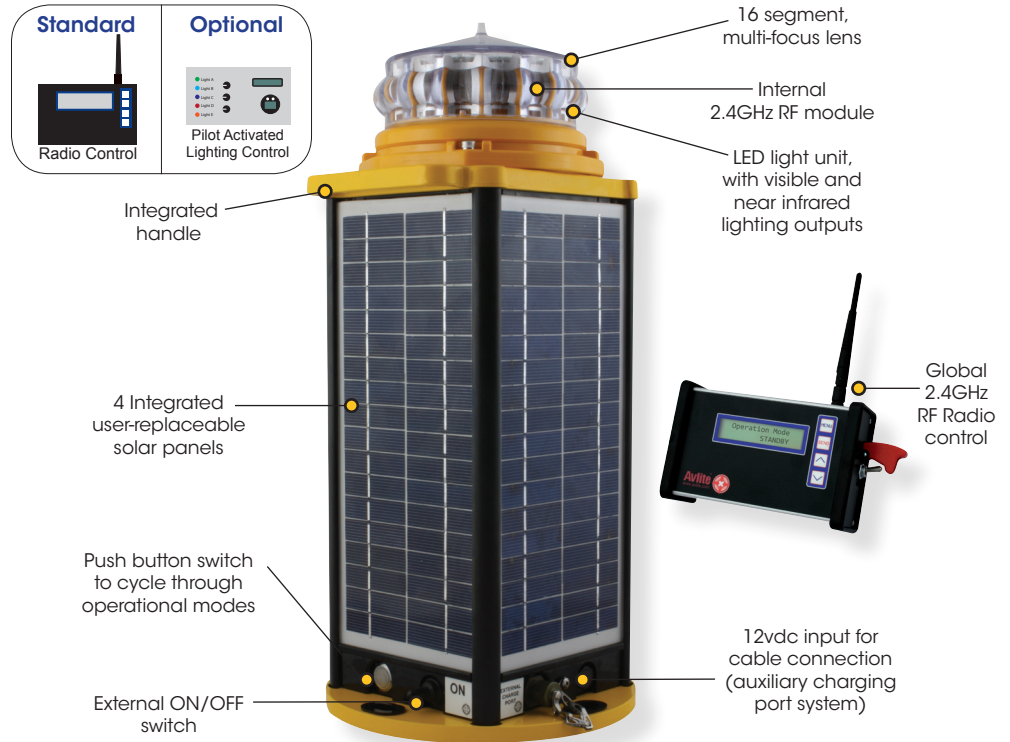
- Over 50hrs of continuous operation at FAA non precision MIRLS per AC/150-5345-46D L861 without solar or auxiliary charge in temporary high mode
- OR
- Over 110hrs of continuous operation at ICAO Annex 14 runway edge, 50cd
- Integrated and replaceable Solar Panels - Enables continuous operation
- Optional 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. Worldwide ISM use frequency
- AvMesh® integrated Mesh Network - Each light is a receiver/transmitter to expand communication range
- Radio Transceiver - Internal to light head, no external antenna
- Modes of Operation - Programmable lighting groups, dusk-till-dawn operation, adjustable intensity, sequence flashing

Typical Applications

- Solar Runway Edge Light
- Solar Threshold Light
- Approach (Strobe & Fixed)
- Solar Obstruction 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)



The AV-425-RF is a robust, completely self-contained LED light designed for a range of emergency aviation applications including runway, threshold, approach, helipad and tactical airfield lighting. Fitted with RF radio control, this fully functioning light can be controlled from the tower with no costly cabling or trenching required.

The unit is made from cast aluminium, subject to 7-stage powder-coating in aviation yellow. Four premium grade solar modules are integrated into the assembly and mounted to collect sunlight at all angles.

The solar array charges the 24Ah battery during daylight hours, and at dusk the light will automatically begin operation.

16 independently controlled LED drivers within the light optic (patents pending) allow the AV-425-RF fixture to operate as an omnidirectional or bi-directional assembly designed to meet the photometric requirements of FAA L861 runway edge and threshold when set to temporary high mode.

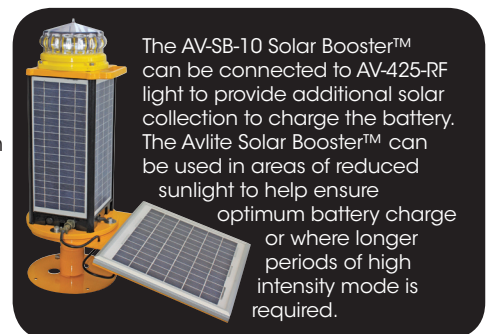
The AV-425-RF has non-precision IFR and VFR capability with both visible and near infrared lighting outputs. The airfield lights can be controlled anywhere in the airfield by handheld radio controller or in the air traffic control tower with virtually unlimited range using an encrypted repeating mesh network.

The AV-425-RF wireless RF light has an extended range through the use of the AvMesh® communication network. The proprietary AvMesh® network enables each light to transmit and receive commands, allowing the airfield to be expanded or altered at any time.

AvMesh® is self-realizing, meaning once deployed the airfield lights will undertake a period of network mapping, whereby the system automatically determines an efficient path to relay command messages through the airfield.

AvMesh® has redundancy. Once the system has mapped an efficient relay of command messages, a secondary sub-network is mapped for added redundancy.

The AV-425-RF 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.



The AV-SB-10 Solar Booster™ can be connected to AV-425-RF light to provide additional solar collection to charge the battery. The Avlite Solar Booster™ can be used in areas of reduced sunlight to help ensure optimum battery charge or where longer periods of high intensity mode is required.

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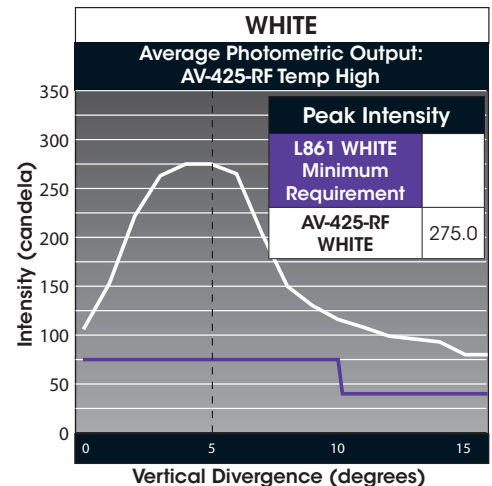
AV-425-RF

Light intensities 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. Sequenced approach can also be easily set up via the serial port and controller.

Tested to MIL-STD's for environmental exposure including shock and vibration, extreme temperature and humidity, the unit is designed to offer years of maintenance-free service and operate in some of the world's harshest environments.

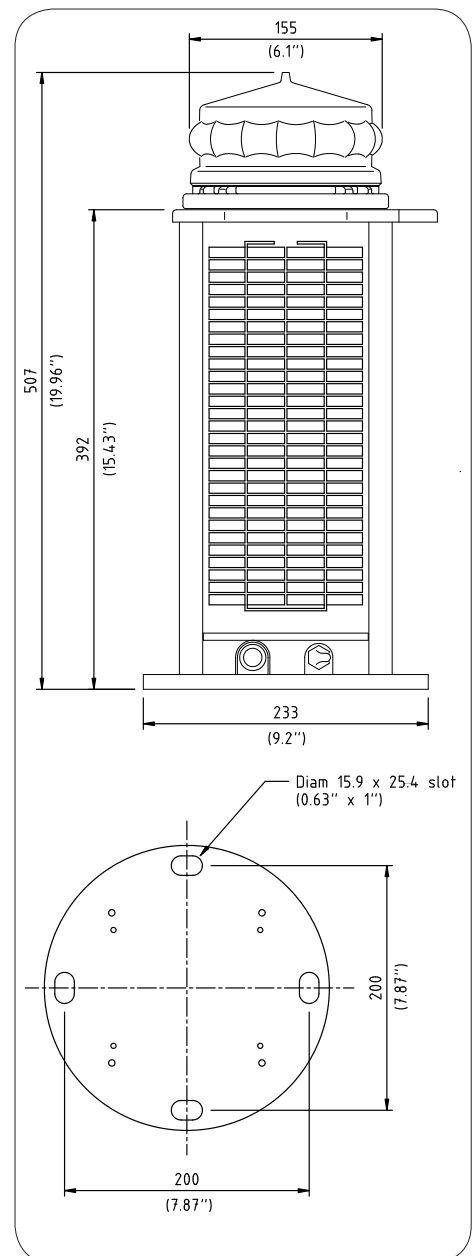
The AV-425 is also available without RF radio control (AV-425).

To suit localised standards, the AV-425-RF can be supplied with optic head designed to comply with either FAA L861 or ICAO Annex 14 photometrics.



For additional AV-425-RF Photometric Output colors please see the graphical representations on page 3

SPECIFICATIONS* *	AV-425-RF
Light Characteristics	
Light Source	16 ultra-high intensity LEDs
Available colors	Red, Green, White, Yellow, Amber, Blue, Sectored Combinations. IR
Peak Intensity @ temporary high (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
Available Flash Characteristics	>250 including steady-on (user-adjustable) including Morse Code and RF sequenced & synchronised flashing
Intensity Adjustments	FAA: Low (10%), Medium (30%), High (100%) ICAO: Low (20%), Medium (40%), High (100%)
LED Life Expectancy (hours)	>100,000
Electrical Characteristics	
Circuit Protection	Integrated
Operating Voltage (V)	12
Temperature Range	-40 to 80°C
Solar Characteristics	
Solar Module Type	Multicrystalline
Output (watts)	18
Solar Module Efficiency (%)	14
Charging Regulation	Microprocessor controlled
Power Supply	
Battery Type	SLA (Sealed Lead Acid)
Battery Capacity (Ah)	24
Nominal Voltage (V)	12
Autonomy - FAA Optic (hours)	Steady-on: Low intensity: >320 hours Medium intensity: >130 hours High intensity: >50 hours
Autonomy - ICAO Optic (hours)	Steady-on: Low intensity: >170 hours Medium intensity: >110 hours High intensity: >60 hours
Radio Controlled	
Frequency	2.4GHz ISM Band
Range	Up to 1.4km relayed
Expandability	AvMesh®
Compliance	FCC / CE
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 (Patent pending)
Mounting	4 hole 200mm bolt pattern
Height (mm/inches)	507 / 20
Width (mm/inches)	233 / 9 1/8
Mass (kg/lbs)	14 / 30 7/8
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
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
Waterproof	IP68
Intellectual Property	
Patents	Patents pending
Trademarks	AVLITE® is a registered trademark of Avlite Systems
Warranty* *	3 year warranty
Options Available	<ul style="list-style-type: none"> • Avlite Pilot Activated Lighting Control • IR LEDs • Without RF Radio Control



† Intensity setting subject to solar availability
* Specifications subject to change or variation without notice
* Subject to standard terms and conditions



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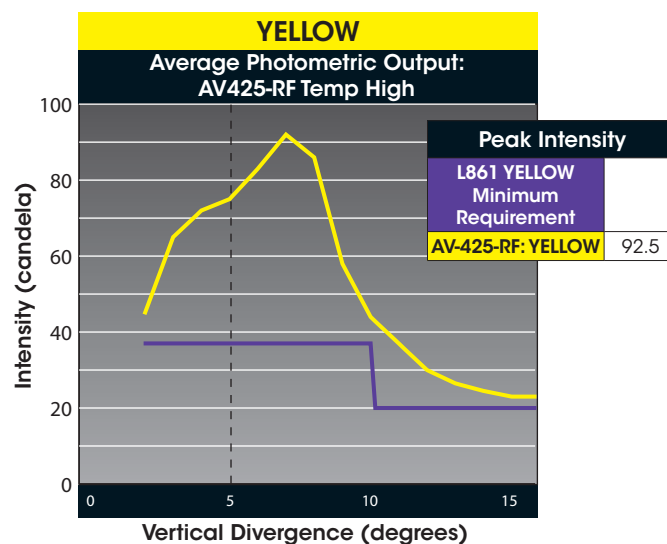
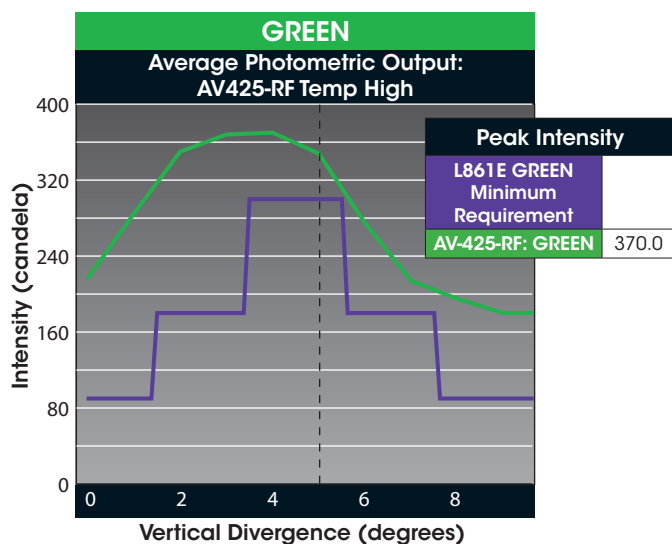
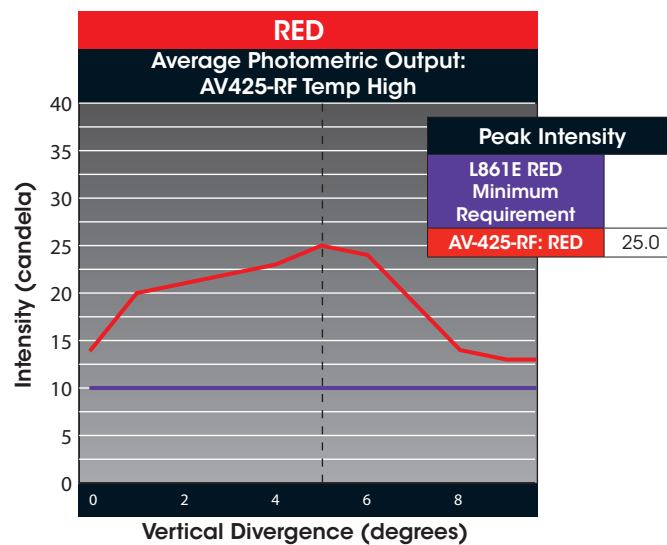
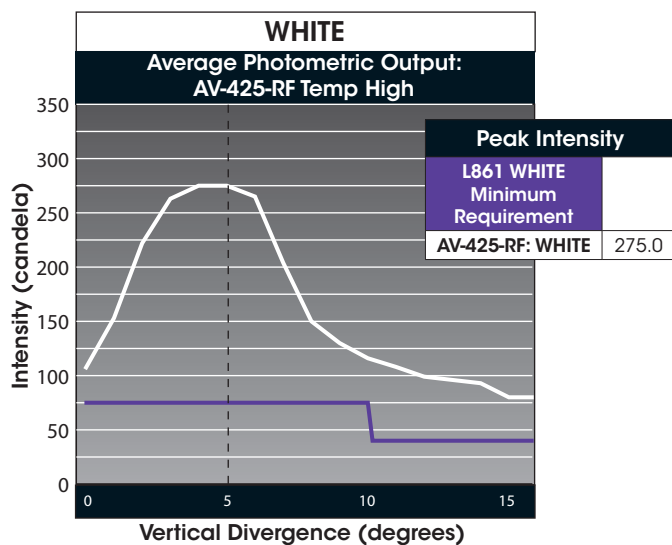
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Note: The figures shown in the above graphs are for 100% (Temp High) Mode