

# AV450-RF Radio-Controlled Solar Airfield Light

## Features

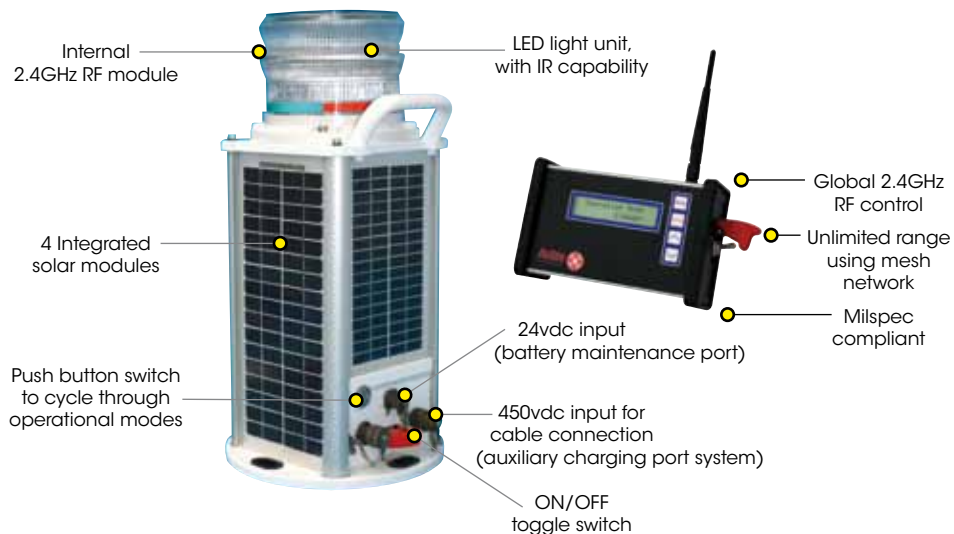
- 2.4GHz worldwide accepted radio control
- 128bit security encryption
- NVG compatible using IR LEDs
- 3-step intensity adjustment with custom settings
- Internal protected RF receiver
- Mesh network with unlimited range
- High capacity replaceable battery pack
- Solar powered
- 24vdc charging port (battery maintenance port)
- High voltage cable input (auxiliary charging port system)

## Compliance

- ICAO Annex 14 Volume 1, 'Aerodrome Design and Operations', Forth edition July 2004.
- Runway Edge - paragraph 5.3.9
- 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
- Meets intensity for FAA AC/150-5345-46D L861 (High Intensity Mode)

## Applications

- Runway Edge
- Threshold
- Approach (Strobe & Fixed)
- Helipad
- Tactical



**Avlite Systems' AV450-RF is a robust, completely self-contained remote-controlled LED light designed for a range of aviation applications including runway, threshold, approach, helipad and tactical airfield lighting. When set up as a complete airfield lighting system this fully functioning lighting system can be controlled from the tower with no costly cabling or trenching required.**

In addition, the AV450-RF system has no other infrastructure, special equipment or expertise requirements for installation. Lower capital and minimal maintenance costs are also amongst the major benefits of Avlite's AV450-RF lighting system.

The AV450-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, in the air traffic control tower or from the aircraft via VHF receiver with virtually unlimited range using an encrypted repeating mesh network. The AV450 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 up to 20 hours before recharging of the battery is needed. If requirements exceed 20 hours of operation at IFR capable high intensity output, high voltage power cables can be attached to the AV450-RF allowing for continuous operations at any intensity. A high voltage direct connection to the AV450-RF 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%) and/or 12% increments, and can also be programmed with up to eight intensity settings.

Lights are able to be assigned to a 'light group', and groups can be controlled independently using the wireless handheld controller. Flare paths can be easily set up using an internal switch in the light head.



Avlite Systems, Inc.  
www.avlite.com

For purchase information, contact teaming partners:  
ARC Aviation Renewables Corp.  
Email: info@aviationrenewables.com  
Sierra Nevada Corp.  
Email: productinfo@sncorp.com



# AV450-RF

## Radio-Controlled Solar Airfield Light

To conserve battery power, the AV450-RF has an auto time-out mode which can be set from 1-63 minutes. The operator is able to pre-select the time out period and/or intensity level to suit operational requirements.

The tough polycarbonate lens is specifically designed for use with LEDs, and the patented internal 360° Omnidirectional LED Reflector ensures consistency of light output and intensity. The sectored approach light directs all the light output to 180 degrees.

The electronics, LEDs, integrated radio and internal antenna are securely housed in the sealed lens head unit.

All models contain integrated, rechargeable SLA batteries which are housed in a vented battery compartment to prevent overheating. The base of the unit has four solar panels to maximise energy collection for charging the internal battery.

The unit has an integrated multi-source power supply, switch protection to eliminate inadvertent activation and all connectors come with dust covers to ensure they continue to operate effectively even in dry, dusty conditions. With a convenient carry handle the unit is compatible with glove operation and human factors to MIL-STD-1472.

The corrosion-resistant design of the AV450-RF has a waterproof rating of IP68 (light head and solar panels). The unit interfaces to standard FAA/ICAO mounting bases with soil, cement, asphalt and sand mounting systems also available.

The unit is designed to offer years of maintenance-free, reliable service in the world's harshest environments.

### Radio Control

Avlite Systems' AV450-RF enables users to directly control the operation of singular or groups of airfield lights via a 2.4GHz handheld transceiver or PC interface.

- Control up to 16 groups of lights independently
- Activate and deactivate lights
- Change light colors remotely
- Switch between infrared and visible light
- Set lights to group flash synchronisation



Handheld radio-controller and charger in protective case



# AV450-RF

## Radio-Controlled Solar Airfield Light



### Portable Airfield Lighting System (ALS)

The Portable ALS is manufactured to military specification requirements with VFR and IFR LED visible and NVG compatible lighting capabilities. Modular in its design, this is a complete trailer mounted, radio controlled, portable airfield lighting system which allows for convenient and fast installation.

#### Featuring:

- Complete stand alone modular system designed and tested to military specifications
- Rapid deployment, capable of set up in 45 minutes for IFR and VFR operations
- Global 2.4GHz RF control from air, ground and tower
- NVG compatible with infrared and visible LED outputs
- Optional power cables, trailers, airfield control system and power distribution unit

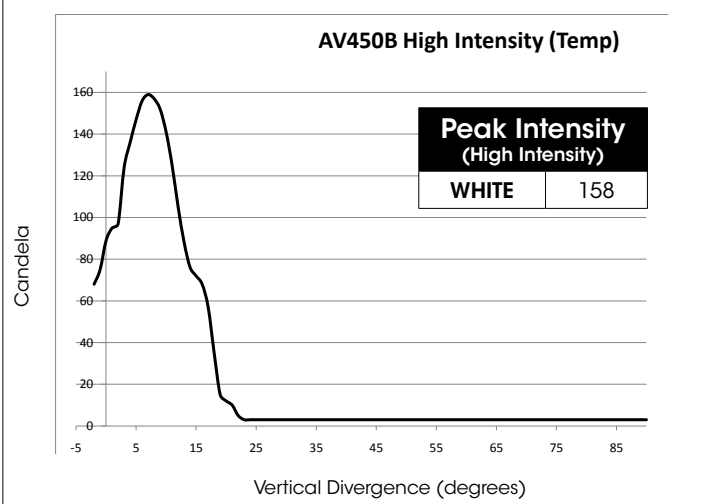
#### Applications:

- Defence - tactical & permanent
- Civil - emergency & permanent
- Humanitarian aid
- Resource industry



### Photometrics

#### AV450B= High Intensity (Temp) Photometric Output



### Testimonials

"In spite of the weather the flight went very well. It was truly an IFR demo since the ceiling was at 600ft scattered. Overall comments from the aircrew were that the lights looked like bright, medium intensity runway lights - [flight condition] Visibility was 6 miles and the lights were clearly visible after breaking out from the clouds. The pilots felt confident that they would be visible for 10+ miles in good weather conditions."

**Army - Redstone Army Airfield (RAAF), Precision/Non Precision Landings Test 09/05/16**

[In reference to feedback on 2 x 10,000 runways, taxiways]

"The Runway Lights are awesome. They look phenomenal and everyone here is very impressed with the way they look and their capability."

"The lights work magnificiently."

"SNC as a whole has been great! Their professionalism and willingness to assist Ali Base, Iraq in all Airfield Lighting matters have been excellent! Everyone is pleased with our current lighting situation and is grateful to SNC. Our runway, at one point in time, was almost pitch black. Now, it has done a complete 180 and pilots and users alike are excited about the upgrade."

**USAF - Ali AB, Iraq**



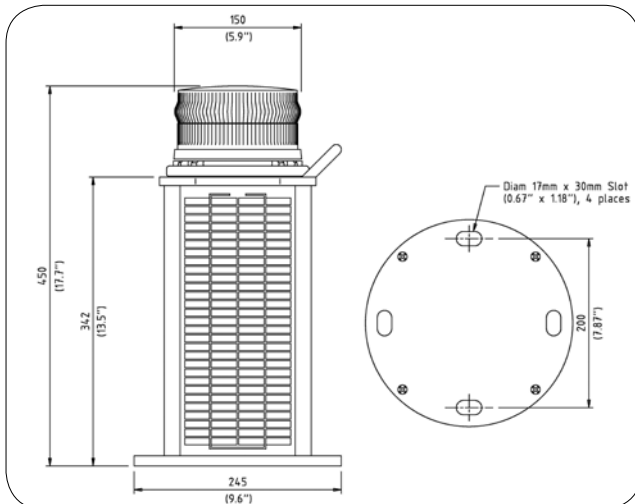
Avlite Systems, Inc.  
www.avlite.com

For purchase information, contact teaming partners:  
ARC Aviation Renewables Corp.  
Email: info@aviationrenewables.com  
Sierra Nevada Corp.  
Email: productinfo@sncorp.com



# AV450-RF

Radio-Controlled Solar Airfield Light



## SPECIFICATIONS •

### Light Characteristics

|                                 |  |
|---------------------------------|--|
| Light Source                    | 108 ultra-high intensity LEDs (72 x visible, 36 x IR)  |
| Available Colors                | Red, Green, White, Yellow, Amber, Blue, Sectored Combinations                                    |
| High Intensity (temporary)      | >125cd (white) - meets intensity requirements for FAA AC/150-5345-46D L861 (High Intensity Mode) |
| Medium Intensity (temporary)    | >50cd  |
| Standard Intensity (cd)         | >25cd  |
| Horizontal Output (degrees)     | 360  |
| Vertical Divergence (degrees)   | 0 to +15   |
| Reflector Type                  | Omnidirectional 360° LED Reflector (US Pat. No. 6,667,582. AU Pat. No. 778,918)                  |
| Available Flash Characteristics | Fixed-on as standard (>250 available (user-adjustable))  |
| Intensity Adjustments           | Adjustable in 25% increments   |
| LED Life Expectancy (hours)     | >100,000   |

### Electrical Characteristics

|                       |  |
|-----------------------|--|
| Circuit Protection    | Integrated   |
| Operating Voltage (v) | 12   |
| Autonomy              | 177 hours at standard (15%) intensity, 71 hours at medium (38%) intensity, 26.5 hours at temporary high (100%) intensity |
| Temperature Range     | -40 to 80°C  |

### Solar Characteristics

|                             |                           |
|-----------------------------|---------------------------|
| Solar Module Type           | Multicrystalline          |
| Output (watts)              | 18 (3 x 5watt, 1 x 3watt) |
| Solar Module Efficiency (%) | 14                        |
| Charging Regulation         | Via PSU CCA               |

### Power Supply

|                       |  |
|-----------------------|--|
| Battery Type          | SLA (Sealed Lead Acid), approved for air transport |
| Battery Capacity (Ah) | 20   |
| Nominal Voltage (v)   | 12   |

### Physical Characteristics

|                           |  |
|---------------------------|--|
| Body Material             | 7-stage powder-coated aluminium            |
| Lens Material             | LEXAN® Polycarbonate - UV stabilized       |
| Lens Diameter (mm/inches) | 150 / 5 7/8                                |
| Lens Design               | External optics with interior flute design |
| Mounting                  | 4 x 17mm holes on 200mm PCD                |
| Height (mm/inches)        | 450 / 17 3/4                               |
| Width (mm/inches)         | 245 / 9 2/3                                |
| Mass (kg/lbs)             | 11.8 / 26                                  |
| Product Life Expectancy   | Up to 12 years                             |

### Certifications

|                   |                                    |
|-------------------|------------------------------------|
| CE                | EN61000-6-3:1997. EN61000-6-1:1997 |
| Quality Assurance | ISO9001:2000                       |
| Waterproof        | IP68                               |

### Intellectual Property

|            |   |
|------------|---|
| Patents    | US Pat. No. 6,667,582. AU Pat. No. 778,918          |
| Trademarks | AVLITE® is a registered trademark of Avlite Systems |

### Warranty \*

Up to 3 years



- Specifications subject to change or variation without notice
- \* Subject to standard terms and conditions



Avlite Systems, Inc.  
www.avlite.com

For purchase information, contact teaming partners:  
ARC Aviation Renewables Corp.  
Email: info@aviationrenewables.com  
Sierra Nevada Corp.  
Email: productinfo@sncorp.com

