Solar Aviation Light

AV-426

Installation & Service Manual - V7.0

Avlite®

"We Believe Technology Improves Navigation."

Manual Update Register

Version No.	Description	Date	Reviewed	Approved	Design
6.0	AV-426 Product Update and Manual Launch	May 2021	P. Naidu	W. Evans	M. Sugars
7.0 (Current)	Add IP68 Ingress Rating	January 2024	P. Naidu	W. Evans	M. Sharp

Contents

1.0 Introduction

Congratulations! By choosing to purchase an Avlite light, you have become the owner of one of the most advanced solar LED airfield lights in the world.

Avlite Systems draws on more than 25 years experience in the design and manufacture of navigation aids, and particular care has been taken to ensure your light gives years of trouble free service.

As a commitment to producing the highest quality products for our customers, Avlite has been independently certified as complying with the requirements of ISO 9001:2015 quality management system.

By taking a few moments to browse through this booklet, you will become familiar with the versatility of your light, and be able to maximise its operating function.

Please remember to complete the Avlite warranty registration at www.avlite.com.

2.0 Technology

Avlite Systems is a world-class solar lighting systems manufacturer with a proven reputation for rapid, innovative, and agile technology solutions designed specifically for defence, government, civil and humanitarian aid operations in the most remote, toughest environments.

Electronics

Avlite employs leading in-house electronic engineers in the design and development of software and related circuitry. All individual electronic components are sourced directly by Avlite procurement staff ensuring that only the highest quality components are used in our products.

LED Technology

All Avlite lights use the latest advancements in LED (Light Emitting Diode) technology as a light source. The major advantage of LED's over traditional light sources is well established in that they typically have an operational life in excess of 100,000 hours, resulting in substantial savings to maintenance and servicing costs.

Precision Construction

Commitment to investing in the design and construction of injection-moulded parts including optic lenses, light bases and a range of other components ensures that all Avlite products are of a consistent and superior quality.

Optical Performance

Avlite manufactures a range of aviation LED lenses moulded from multi-cavity dies. The company has superior in-house lens manufacturing capabilities to support outstanding optical performance.

Award-winning, Patented Technology

Several United States and Australian patent registrations are held on Avlite's range of innovative designs, with other regional patents pending in Canada, United Kingdom and Europe.

3.0 AV-426 Models (L-861, L-861E and ICAO)

The robust design of the AV-426 self-contained light ensures up to 12 years of reliable service with minimal ongoing maintenance.

Specifically designed to survive the harshest environments, the AV-426 features a grivory top and base as well as an aluminium internal chassis. The top casting is constructed with an integrated handle that helps with any manual handling of the unit.

The solar chassis is available in two chassis heights; Compact or Standard, both of which come with upgraded solar panels and a maximum power point tracker (MPPT) to optimize solar input into the 12Ah (Chassis type C0) or 24Ah (Chassis Type C1 only) battery for longer run time. As standard, each chassis comes with an external ON/OFF switch and an external charging port for supplementary battery charging.

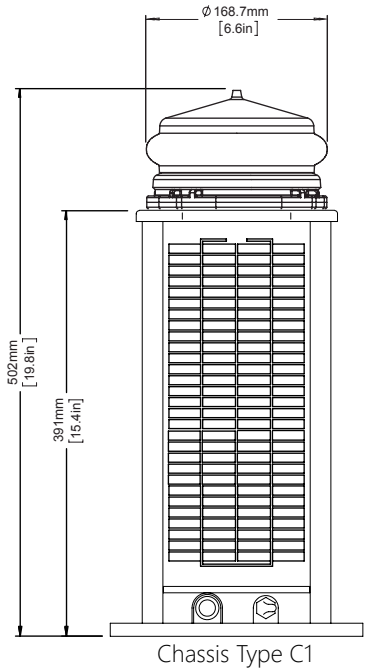
The four hole bolt pattern will fit directly onto any 200mm outside diameter (OD) mount.

The AV-426 has medium intensity runway lighting capabilities 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 the encrypted repeating AvMeshTM network. For more information about our AvMesh™ RF Communications Systems, please refer to the QuickStart Guide or the Installation and Trouble Shooting Manual available at www.avlite.com.

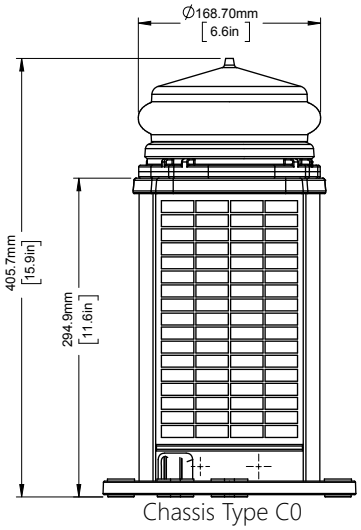
The LED optic comes compliant to either FAA or ICAO standards. The high impact resistant polycarbonate lens ensures even light visibility.

3.1 Available Options

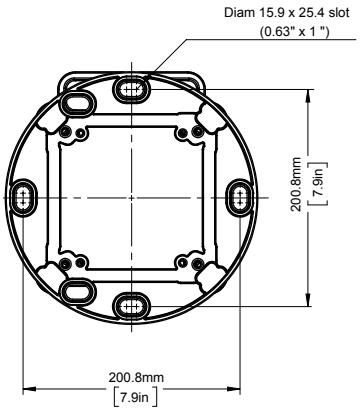
- Radio Control
- IR LED Output
- PALC



Chassis Type C1



Chassis Type C0



4.0 AV-426 Data Sheet

AV-426	C0	C1

Light Characteristics

Light Source	LED	
Available Colours	Red, Green, White, Yellow, Blue, Bi-directional Combinations, IR	
Intensity Adjustments	FAA: Low (10%), Medium (30%), High (100%), ICAO: Low (20%), Medium (40%), High (100%)	
Operating time at maximum intensity	56 hours	112 hours
LED Life Expectancy (hours)	>100,000	

Electrical Characteristics

Circuit Protection	Integrated	
Operating Voltage	12	
Temperature Range	-40 to 55°C	

Solar Characteristics

Solar Module Type	Monocrystalline	
Output (Watts)	20 (4 x 5watt)	28 (4 x 7watt)
Charging Regulation	MPPT	

Power Supply

Battery Type	SLA (Sealed Lead Acid)	
Battery Capacity (Ah)	12	24
Nominal Voltage (V)	12	
Charger	External	
Rated Power	50 W	
Input Voltage	12 VDC	

Radio Controlled

Frequency	2.4GHz ISM Band
Range	Up to 1.4km relayed
Expandability	AvMesh®
Compliance	FCC / CE

Physical Characteristics

Body Material	Composite Polymer	
Lens Material	LEXAN® Polycarbonate – UV stabilized	
Lens Diameter (mm/inches)	168 / 6 ¾	
Lens Design	Multi-LED optic	
Mounting	4 hole 200mm bolt pattern	
Height (mm/inches)	406 / 16	503 / 20
Width (mm/inches)	234 / 9.2	
Mass (kg/lbs)	9.1 / 20	14 / 30.85
Service Life	Up to 12 years	

Environmental Standards

Shock	MIL-STD-202G, Test Condition G, Method 213B
Vibration	MIL-STD202G, Test Condition B, Method 204
Wind Speed	Up to 160kph / 100mph
Humidity	0 to 100%, MIL-STD-810F

Compliance

FAA	FAA AC150/5345-46E, L-861, L-861E
ICAO	ICAO Annex 14, Vol 1, July 2018
CE	EN61000-6-4:2012, EN61000-6-2:2019
Quality Assurance	ISO9001:2015
Waterproof	IP68
Trademarks	AVLITE® is a registered trademark of Avlite Systems

Other

Warranty *	3 year warranty
Options Available	Radio Control IR LED Output AC Charging
Terms and Conditions	Please refer to the light installation manual for furtherspecifications. Warranty Terms and Conditions - www.avlite.com

5.0 Safety Information

Before proceeding with installation or service, make sure the following conditions are met:

- Ensure power lines are not 'live' (NO ELECTRICAL HAZARD)
- Avoid touching live circuits!
- Avoid touching any component or any part of the circuitry while the unit is operating. Do not change components or make adjustments inside the unit with power on.
- Make sure the light fixture mounting is vertically aligned to guarantee the required beam pattern of the airfield light.
- Make sure any nearby obstacles do not impede the lights' beam pattern.
- When installing, comply with all local electrical code(s).
- Mains power should always be disconnected when work is being done in close proximity to electrical fittings, and electrical work should only be done by a licensed electrician.
- Operate the light only within the indicated electrical ratings and product usage instructions.
- To ensure that the light and peripheral equipment function safely and correctly, use cable in compliance with the effective local electrical code.
- Do not stare at the LED or shine the LED into your eyes or those of another person.
- Dispose of the product according to the local laws and regulations for your region, for example, at a recycling centre that accepts electronic devices.

6.0 Operation and Setup

Avlite's AV-426 is a robust, completely self-contained solar powered LED light. The solar module of the light converts sunlight to an electrical current that is used to charge the battery during daylight hours. The battery provides power to operate the light at night.

External ON/OFF Switch

The light is fitted with an external ON/OFF switch below the solar panel at the base of the unit. The ON/OFF switch may be useful if the unit is only required for short periods (i.e. it is being moved or needs to be stored often), and disconnecting the battery is not viable.

External Battery Charging Port

The external battery charging port is also found below the solar panel at the base of the unit. This can be used to recharge the battery if the light is being stored for more than 1 month or if the amount of sunlight is limited (e.g. in challenging solar locations or during Winter months). Please see AV-426 Long Term Battery Storage & Maintenance in the Maintenance & Servicing section of this manual.

RF Control

The AV-426 wireless RF light has an extended range through the use of the AvMesh® communication protocol. The proprietary AvMesh® protocol 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. Once the system has mapped an efficient relay of command messages, a secondary sub-network is mapped for added redundancy. Light intensities can be set to Low, Medium or High and are able to be assigned to a 'light group'. Light groups can be controlled independently using the wireless handheld controller. Sequenced approach can also be easily set up via the RF handheld controller.

6.1 Activation

Charging the Battery

Automatic Solar Charging: New lights should be left in the sun for several days to ensure battery is charged before placing in service.

Manual Battery Charging: For C0 and C1 variants, connect the external DC charger from the charge port to the AC power source

Preferred Installation Location

For best light performance, ensure solar modules are not covered and are in clear view of the sky with no shadows.

Lantern Operation

The AV-426 is activated via the ON/OFF switch, at the base of the unit.

Light Groups

For RF variants, the light group is set by the factory, however, they can be changed if required. Pleasesee the AvMesh™ RF Communications Manual for more information.

Default light groups are shown below:

Node Type	Default Light Group
AV-426-XXXX-XX-XX-RL	3
AV-426-XXXX-XX-XX-OA	3
AV-426-XXXX-XX-XX-UA	3
AV-426-XXXX-XX-XX-SQ	3
AV-426-XXXX-XX-XX-W	5
AV-426-XXXX-XX-XX-Y	5
AV-426-XXXX-XX-XX-WY	5
AV-426-XXXX-XX-XX-WR	5
AV-426-XXXX-XX-XX-YR	5
AV-426-XXXX-XX-XX-GY	5
AV-426-XXXX-XX-XX-RG	6
AV-426-XXXX-XX-XX-RX	6
AV-426-XXXX-XX-XX-GX	6
AV-426-XXXX-XX-XX-B	7

Radio Channel

The RF enabled AV-426 fixtures are fitted with 128-bit Radio encryption. This includes user adjustable encryption keys as well as user adjustable channel settings (0x0C-0x17).

By default, both the RF enabled light fixtures as well as the RF Handheld controller are set to channel 10 (i.e 0x10) so that the handheld controller can communicate with the lights and control them successfully. The radio channel can be changed as long as the handheld controller and light fixtures are set to the same radio channel. If they are set to different channels, the lights will not be able to receive and respond to the control signals from the handheld controller. Please see the AvMesh Communications manual for information on how to modify the radio channel.

7.0 Optional IR Remote Control

Test Mode / Configure T/C

Pressing the T/C button for up to 5 seconds places the light in Test Mode. The light will flash once in response to the T/C button being pressed and then turn off.

Normal Operation

The light will return to normal operation once it has not detected a valid key press for 30 seconds. The light will flash once to indicate it is returning to normal operation.

Read

Pressing the Read followed by one of the configuration keys shall cause the light to flash the configured value.

Example Key Sequences:

R B T/C — The light flashes the current battery status.

R L T/C — The light flashes the sunset level in Lux, followed by a 2 second gap, followed by the sunrise level. Levels are in the range of 1 to 9.

R B T/C — The light flashes the Operational Mode. Modes are as follows:

1 flash = Always-On

2 flashes = Standby

3 flashes = Dusk-to-Dawn

Operational Mode

The light has three modes of operation: Always on, Standby Mode and Dusk-to-Dawn mode. These modes can be selected either via the IR remote control or via the GSM module (if fitted).

In Always On mode, the daylight sensor is disabled and the lantern will remain ON.

In Standby mode, the lantern is turned off and the daylight sensor is disabled. This mode does not affect the operation of the GSM module.

In Dusk-to-Dawn, the daylight sensor is enabled.

R B I T/C — Read Operation mode

B I 1 T/C — Always on mode

B I 2 T/C — Standby mode

B I 3 T/C — Dusk-to-Dawn mode

Battery Status B

This function reads the battery status. The response from the light is:

4 flashes = High Voltage

3 flashes = Good Voltage

2 flashes = Low Voltage

1 flashes = Cutoff Voltage or below

Example Key sequence: R B T/C

Lux L

This key sets the ambient light threshold levels.

The format is L X T/C

Where 'x' is the desired setting from the table below.

There are 5 programmable lux levels which are set together for the sunset and sunrise transitions.

Level	Sunset (Dusk)	Sunrise (Dawn)
1	64	100
2*	100	150
3	150	240
4	240	370
5	370	600
*Default/Factory Preset		

Example key sequence: L 1 T/C

Assume the current Lux settings are at the factory preset values of 2.

This sets the ambient light level to be lower than the default 100 lux. The light will turn on when its surroundings are darker.

Error/Acknowledge Indication

If the key sequence is invalid, or an out of bounds value is attempted to be set, the light flashes 5 times for 1 second. (The command then needs to be sent from the start.)

Example key sequence: (Set the intensity level to 5 – undefined.) I 5 T/C

The light flashes 5 times for 1 second.

When a key sequence has been entered successfully the light will respond acknowledgement with a 1 second flash.

7.0 Unpacking, Installation, Wiring and Setup

7.1 Unpacking

Unpack all hardware and inspect for damage. If there is any damage, please contact your Avlite Office. Retain original packing material for possible future use in shipping.

WARNING:

DO NOT connect directly to an unregulated power source. Connecting to an unregulated source may result in damage.

WARNING:

Do not stare into light emitting diode (LED) beams.

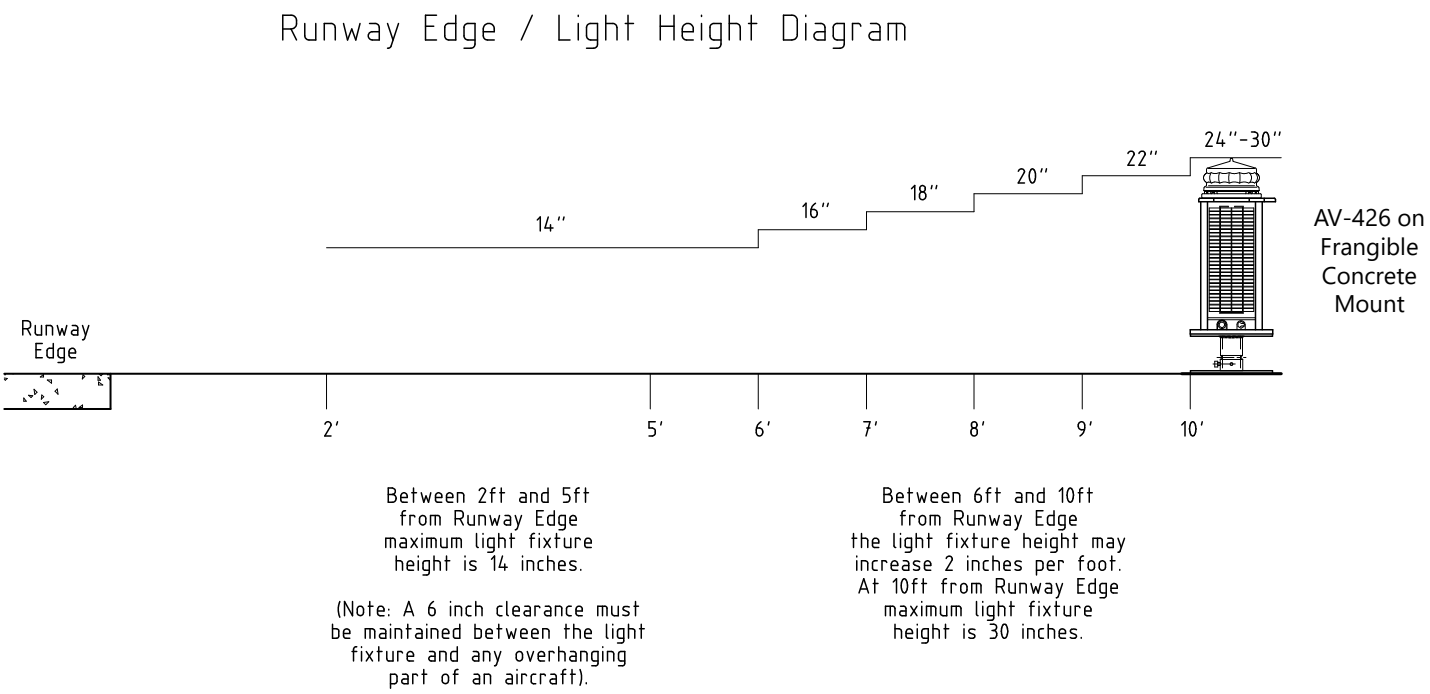
WARNING:

LED lights contain glass components. Do Not Drop.
Always follow the instructions outlined in the product manual when cleaning the equipment. Improper cleaning methods and use of unauthorized cleaning agents can damage equipment.

7.2 Installation

7.2.1 Location

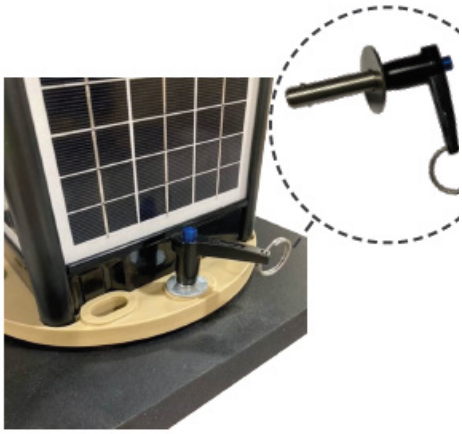
For best light performance, the light fixtures should be installed in an area where the solar modules are not covered and are in clear view of the sky with no shadows. See FAA guidelines below:



7.2.2 Installation Recommendation

1. Installation of the Light Fixture

The AV-426 fixture is able to be installed on any appropriately reinforced mounting point with a 200 PCD. Alternatively, the appropriate mounting accessories can be purchased separately from Avlite. The installation of these mounting accessories is described below:



Option 1: Installing the Light Assembly to the Mounting Tile

The completed AV-426 assembly is to be mounted on the tile in firm soil (not loose sand, screenings or other unbound material).

a. Align the holes of the light base to the holes of the mounting tile.

b. Place a large washer over the hole on the chassis base. For quick release pins: Hold the blue button on the quick release pin and insert the pin through the washer and onto the light base and mounting tile. Repeat on the other side. For bolts: Fit the AV-426 on the top of the mounting tile. Insert bolts through the holes in the tile, entering from the bottom. Install a penny washer and a nut on each bolt. Tighten nuts.

Note: Position countersunk mounting pin holes face up for secure light installation.

Option 2: Installing the Light Assembly to the Frangible Stake Mount

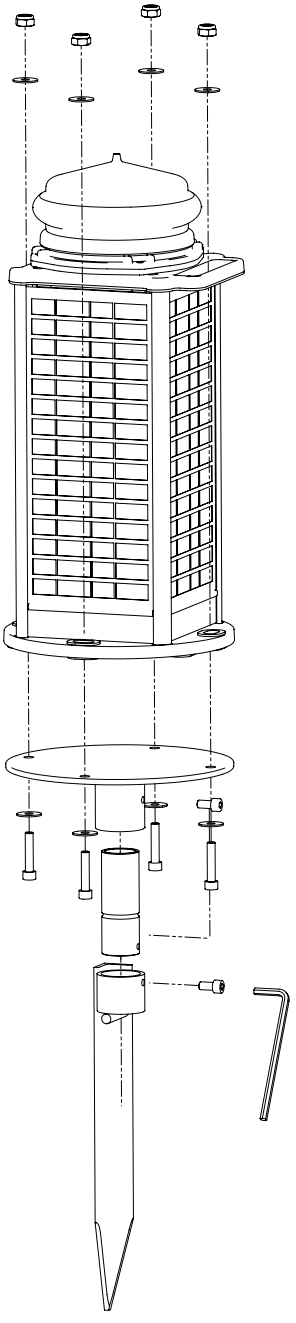
The completed AV-426 mount plate assembly is to be mounted on the stake in firm soil (not loose sand, screenings or other unbound material).

a. Fit the AV-426 on the top of the mounting plate. Insert bolts through the four holes in the mount, entering from the bottom. Install a penny washer and a Nylock nut on each bolt. Tighten Nylock nuts.

b. Use a sledge hammer to drive the stake into the soil at the chosen location. Drive the stake down until the bottom of the stake sleeve is at ground level.

c. Fit the AV-426 and mounting plate assembly on top of the stake. The point of frangibility should be completely clear of the stake sleeve or ground support hardware. Use the socket head cap screws supplied to hold the frangibility point above the sleeve. Using a 6mm Allen key, tighten the bottom socket head cap screws against the stake sleeve.

NOTE: After adjustments, ensure all nuts and bolts are tightened securely and all tools, spares and packaging are removed from the runway.



Option 3: Installing the Light Assembly to the Frangible Concrete Mount

a. Mount the base plate to the concrete using 4 x M8 concrete bolts.

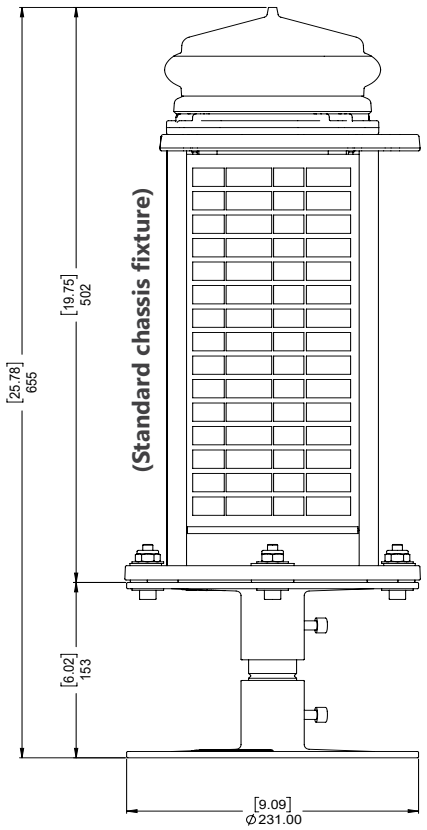
b. Fit the frangible mounting plate onto the concrete base plate and secure using the M8 x 16 SHCS

c. Level the light mounting plate using a spirit level.

d. Fit the AV-426 to the light mounting plate using M8 SHCS, large flat washers and Nylock nuts.

e. For further adjustments on levelling the light, see next section on levelling the light.

NOTE: After adjustments, ensure all nuts and bolts are tightened securely and all tools, spares and packaging are removed from the runway.



Levelling the light

During Installation every effort should be made to ensure that the light is level when installation is complete.

The following will help to ensure that the lights are installed correctly:

When installing a stake mount into the ground ensure that the stake is installed straight into the ground and not at an angle.

When installing a concrete mount plate ensure that the concrete pad is level using a spirit level.

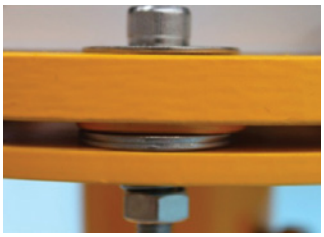
Check the mounting plate with a spirit level in all directions

Fit the frangible coupling and top mounting plate and check that the light mounting plate is level using a spirit level.

If the mounting assembly can not be levelled to a satisfactory plane, then spacers can be used under the 4 mounting points to complete levelling.

Spacers must be secured. Flat penny Washers can be placed under the 4 mounting points and secured in place by the mounting bolts.

Washers of different thicknesses can be used, as can multiple washers. Use longer bolts when required.



Important: Please ensure that spacers are not just under one mounting point. Please fill in spacers under other mounting points. Failure to space gaps will result in damage to the base or the mounting plate.

2. Charging the Battery

The AV-426 fixtures will charge automatically when placed in sunlight. In addition, the AV-426 is also fitted with a charge port on the base of the unit that can be used to manually charge the battery. The method of charging is determined by the chosen chassis variant.

For C0 and C1 chassis variants, an external DC charger is required to interface into the AV-426. See section *6.1 Activation* for further information.

Simple Approach Lighting and Runway End Identifier Light (REIL)

The AV-426 (ICAO compliant variants only) are able to be configured as an approach light for use in simple approach lighting systems or as a Runway End Identifier Light (REIL). This is pre-programmed by the factory and does not require further user adjustment.

NOTICE:

The information contained in this publication is advisory only. Please contact your local authority for rules and regulations particular to your region.

8.0 Operation and Setup

Designed to be almost maintenance-free, the AV-426 requires minimal attention, though the following maintenance and servicing information is provided to help ensure the life of your Avlite product.

1. Cleaning Solar Panels - occasional cleaning of the solar panels may be required. Using a cloth and warm soapy water, wipe off any foreign matter before rinsing the panels with fresh water.

2. Battery Check - inspection of batteries should be performed every three years (minimum) to ensure that the charger, battery and ancillary electronics are functioning correctly. Using a voltage meter, check that the battery voltage is at least 12 volts under 100mA load, and ensure all terminals are clear of foreign matter.

3. O-Ring Check - inspect the condition of the O-ring for damage, wear or if it is brittle, and replace if necessary. The O-ring should be a rubber texture to ensure a complete and even seal.

Service Tools

- 1 x M2 Allen Key
- 1 x M5 Allen Key
- 1 x 13mm Combination Wrench
- 1 x M8 Allen Key
- 1 x 10mm Combination Wrench
- 1 x Silicone Grease

AV-426 Long Term Battery Storage & Maintenance

If the AV-426 is to be placed in storage for an extended period please follow the below information.

The batteries inside the lights must always be stored in a fully charged state.

Always make sure the ON/OFF switch is in the OFF position.

All batteries will discharge over time and the rate of discharge is dependent on temperature. If the light is being stored in temperatures greater than 40°C the battery will discharge faster.

The AV-426 is fitted with a charge port that can be used to charge the battery and test the battery voltage. Please check the battery regularly and recharge if necessary. Charge the battery via the external charging port on the base of the unit. Only attach the plug with your hand, do not use multi- grips to attach the plug.

Turn the ON/OFF switch to the ON position and place unit in the sun for 2-4 days.

NOTICE:

Care must be taken to observe the polarity of each wire before they are connected.
To ensure waterproofing of the unit, make sure that there is a satisfactory seal.

Installing the Light Head Assembly on the Solar Unit

After servicing, it will be necessary to reinstall the light head on the solar unit.

1. Connect the 4 bullet connectors
2. Ensure the O-ring seal on the top of the solar chassis is in place, clean and lightly greased
3. Feed the wires into the corner of the solar unit
4. Locate the light head onto the solar unit in the correct orientation to the runway. The light head is fitted with reflective tape indicators to show light output. This colour indication should be aligned with the colour indication on the solar unit to ensure correct alignment.
5. Fit the 4 x M6 x 20 SHCS
6. Tighten the SHCS evenly and firmly.

- It is recommended that the bolts for holding the light heads to the Solar Base units have a torque setting applied of 3Nm for a satisfactory seal. Applying a higher Torque setting is not recommended and may void warranty. If in doubt, please contact your local Avlite representative.

7. Remove all tools, nuts and bolts from the runway.

Replacing the Battery

The AV-426 has an internal battery compartment, which provides the user with the ability to change the battery after years of operation.

1. Turn the unit on its side
2. Remove the four M6 x 25mm screws from the body/base section.
3. Place the unit back upright while still holding onto the base
4. Slide the chassis upwards just enough to expose the battery wiring loom terminals
5. Disconnect the battery wiring loom terminals
6. Slide the chassis further upwards until it has been removed completely
7. Remove the old battery and discard in a safe manner.
8. Place new battery onto base
9. Slide the chassis back over the new battery just enough so that the wiring loom terminals can be reached.
10. Connect the battery wiring loom terminals, ensuring that the polarity of each wire is correct beforehand.
11. Slide the chassis completely onto the base, ensuring that the chassis sits on the rubber gasket of the base properly and that it is not contaminated.
12. Hold the chassis and base together and place the unit onto its side.
13. Replace and fasten the four M6x25mm screws to a torque setting of 1.8 - 2 Nm. Applying a higher torque setting is not recommended and may void warranty. If in doubt, please contact your local Avlite representative.
14. Place the unit back upright.
15. To test place dark cover (towel or jacket) on top of light to activate sensor, light will come on.

Safe Battery Handling

Charging and Discharging

- Always ensure batteries are fully charged when installing new lights. The light will be dispatched from the Avlite factory fully charged. However if time has elapsed between dispatch and installation, battery voltage must be checked.
- Never short-circuit or reverse polarity of a battery, damage to the battery and device may occur, and there is a risk of fire.
- Do not use different types of batteries in the same battery assembly. Sealed lead acid and NIMH do not mix.
- If the battery has been deep-discharged, a prolonged charging time is required to bring the battery back to full capacity.

Handling

- Do not incinerate or dismantle batteries. Cell components are corrosive and may be harmful to skin and eyes.
- Do not pull on battery lead wires or connector. Excessive force on the leads or connectors can damage the welding joints or other connections.
- Batteries are recyclable. Please dispose of properly.

Storage

- Always store batteries in a cool, dry place.
- After long storage, it is desirable to cycle (charge/discharge) the battery 3 times to restore full capacity.
- Do not mix batteries with metal objects during storage or transportation to avoid accidental short-circuit.
- Do not store large quantities of batteries in a densely packed condition when they are in a charged or partially charged state.

Battery Voltage: 12 Volt Sealed Lead Acid	
State of Charge	Voltage
100%	12.70+
90%	12.5
80%	12.42
70%	12.32
60%	12.2
50%	12.05
40%	11.9
30%	11.75
20%	11.58
10%	11.31
0%	10.5

9.0 Documentation

For future reference, please record the following data and store securely:

Controller Encryption Key:

Controller Serial No.:

Radio Channel:

Light Bank Location, eg. Runway 1, Taxiway, Runway 2:

Light Bank Location 0:

Light Bank Location 1:

Light Bank Location 2:

Light Bank Location 3:

10.0 Troubleshooting

Problem	Possible Cause	Solution
Light will not respond to controller in Radio Control Mode	Refer to AvMesh RF Communications System Installation and Trouble Shooting Manual, available under the AV-426 Downloads section.	
Light will not change between visible and IR/NVG modes	Advanced Operation not enabled	Refer to AvMesh RF Communications System Installation and Trouble Shooting Manual, available under the AV-426 Downloads section.
Light will not change Flash Codes	Flash Codes not enabled in the Radio Control System Menu	Refer to AvMesh RF Communications System Installation and Trouble Shooting Manual, available under the AV-426 Downloads section.
Sync delay not available	Sync not enabled in the Radio Control System Menu	Refer to AvMesh RF Communications System Installation and Trouble Shooting Manual, available under the AV-426 Downloads section.
Light will not activate	Light is not switched ON at the master switch	Ensure that the external switch is in the ON position.
	Battery is flat	Recharge Battery or connect light to external power supply
Lights will not activate during the Day	Light is set to Dusk till Dawn and it is not dark	Cover the light for at least 60 seconds of continuous darkness for the light to activate To activate lights during the day, temporarily change the light settings to Always On. Important: Lights must be turned back to Dusk till Dawn or Standby after required daytime use.
Light will not activate at night	Light is not switched on at the master switch	Ensure that the external switch is in the ON position.
	Light is in Standby Mode	Using the Remote control change light to Dusk till Dawn mode.
Light will not operate all night	Light is exposed to ambient light	Remove ambient light source or shield light from ambient light Recharge battery, connect battery to external power supply or replace battery
	Battery is low	Recharge battery, connect battery to external power supply or replace battery
	Requested operation is greater than solar charge can support	Consult an Avlite representative or email info@avlite.com for solar calculations to verify maximum usage profile
Battery continually goes flat	Battery has failed	Replace battery
	Solar panels are dirty	Clean solar panels
	Light is installed in the shade	Remove shade or move light fixture

11.0 Warranty

Refer to Avlite website at www.Avlite.com.

Notes

Contact Us!

Avlite's solutions are easy-to-install and scalable. We have a solution for every budget.

Avlite Head Office

11 Industrial Drive, Somerville
Victoria, Australia 3912
T: +61 (0)3 5977 6128
F: +61 (0)3 5977 6124

Avlite USA

61 Business Park Drive, Tilton
New Hampshire, USA 03276
T: +1 (603) 737 1311
F: +1 (603) 737 1320

Avlite Asia

8 Wilkie Road, #03-01
Wilkie Edge, Singapore 228095
T: +65 9119 8770

@ info@avlite.com

www.avlite.com

www.star2m.com

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