# Solar Powered ICAO Type A or Type B Low Intensity Obstruction Light



AV-C310-ILA (Type A only) & AV-C410-ILAB (Type A or B)

AV-C410 Model



LED Optic Solar powered, self-contained Small form factor Easy to handle & install Field replaceable components Monitoring options available

AV-C310 Model

#### Features

Integrated solar/battery system

User-replaceable solar modules

IP68 waterproof rating

Available in two power supply sizes to suit various locations

**Optional GSM Monitoring** 

### Applications

Solar Powered Low Intensity Obstruction Light

### Certifications

AV-C310-ILA Low Intensity Type A Obstruction Light, ICAO Annex 14, Volume 1, Sixth Edition, July 2009, 'Aerodrome Design and Operations'

AV-C410-ILAB Low Intensity Type A or B Obstruction Light, ICAO Annex 14, Volume 1, Sixth Edition, July 2009, 'Aerodrome Design and Operations'



AV-C410 shown with optional GSM Cell-Phone Monitoring



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#### Avlite's Solar powered ICAO LIOL Type A or B is a robust, completely selfcontained solar powered LED obstruction light.

The AV-C310-ILA model has four 3 watt (12watt total) premium-grade solar modules integrated into the solar chassis, and mounted to collect sunlight at all angles. The AV-C410-ILAB model has four larger 5watt panels (20 watt total) for use in areas of lower sunlight to maximise solar collection or to support an ICAO LIOL Type B (32cd) light head.

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

The rugged design of this self-contained light ensures in excess of 12 years reliable service with minimal ongoing maintenance. Specifically designed for the harshest of environments, this light features a 7-stage, powder-coated aluminium top, base and internal chassis in high visibility colours for daytime recognition. The rubber, extruded corners provide additional impact resistance.

The advanced light optic uses a single power LED. The tough polycarbonate aviation lens is specifically designed for use with LEDs to maximize light intensity and uniformity. The light head is interchangeable between units, and can be replaced onsite by the operator if required.

The unit can be supplied in varying colour outputs to suit other applications including runway edge lighting. For military applications the unit is also available in infrared (IR).

#### **Optional External ON/OFF Switch & External Charging Port**

These models can be fitted with an optional, external ON/OFF switch. The light can also be fitted with an optional external charging port for charging the battery while it is stored for extended periods.

#### **Optional GPS Synchronisation**

Avlite has utilized the latest advancements in GPS technology to develop an internal synchronisation system that can be incorporated into the lights. Using overhead satellites, multiple obstruction lights set to the same flash pattern will flash in unison.

#### **Optional IR Remote Control**

The IR remote is used to communicate with Avlite lighting products that have an IR sensor fitted. The remote control is used to control functions such as flash code and light intensity.

#### **Optional GSM Cell-Phone Monitoring**

The lights are available with GSM Cell-Phone Monitoring enabling operators to remotely monitor the status of their aviation installations. The system can also be configured to send out alarm SMS text messages to designated cellular telephone numbers. Users can also have alarms and reports sent to designated email addresses.

| SPECIFICATIONS • *   | AV-C310-ILA   | AV-C410-ILAB   | Photometric Output:<br>ICAO LIOL Type A, Steady ON |
|--|---|--|--|
| Light Characteristics  |   |  | 60   |
| Light Source   | As tested AV-OL-ILAB-12-R LED   | As tested AV-OL-ILAB-12-R LED  | 50 Peak Intensity                                  |
| Available colours  | Red as standard. Other colours<br>available on request, including IR  | Red as standard. Other colours<br>available on request, including IR |  |
| Peak Intensity (cd)†   | Complies with ICAO LIOLA  | Complies with ICAO LIOLA & LIOLB                                     |  |
| Horizontal Output (degrees)  | 360   | 360  |  |
| Vertical Divergence (degrees)  | +4 to +13   | +4 to +13  | <b>0</b> <sub>30</sub>                             |
| Reflector Type   | Single LED Optic  | Single LED Optic   |  |
| Available Flash Characteristics  | >250 including steady-on<br>(user-adjustable)   | >250 including steady-on<br>(user-adjustable)                        | AVLITE<br>AVLITE                                   |
| Intensity Adjustments  | Adjustable in 25% increments  | Adjustable in 25% increments   |  |
| LED Life Expectancy (hours)  | >100,000  | >100,000   | 10   |
| <b>Electrical Characteristics</b>  |   |  |  |
| Circuit Protection   | Integrated  | Integrated   | 0<br>-5 0 5 15 35 55 75 90                         |
| Operating Voltage (V)  | 12  | 12   | Vertical Divergence (degrees)                      |
| Power (W)  | Type A: 0.5   | Туре А: 0.5 Туре В: 1.25   |  |
| Temperature Range  | -40 to 80°C   | -40 to 80°C  | Photometric Output:<br>ICAO LIOL Type B, Steady ON |
| Solar Characteristics  |   |  | 60   |
| Solar Module Type  | Multicrystalline  | Multicrystalline   | Peak Intensity                                     |
| Output (watts)   | 12 (4 x 3watt)<br>Microprocessor controlled   | 20 (4 x 5watt)<br>Microprocessor controlled                          |  |
| Charging Regulation Power Supply   | Microprocessor controlled   |  | AVLITE   |
| Battery Type   | SLA (Sealed Lead Acid)  | SLA (Sealed Lead Acid)   |  |
| Battery Capacity (Ah)  | 12  | 24   |  |
| Nominal Voltage (V)  | 12  | 12   | AVLITE<br>AVLITE                                   |
| Typical Autonomy (nights)  | Steady-on: >20 (Type A)   | Steady-on: >40 (Type A)  | ĕ 20   |
|  | · · ·   | >15 (Type B)   | Ē  |
| Physical Characteristics   |   |  | 10   |
| Body Material  | 7-stage powder-coated aluminium   | 7-stage powder-coated aluminium                                      |  |
| Lens Material  | LEXAN® Polycarbonate<br>- UV stabilized   | LEXAN® Polycarbonate<br>– UV stabilized                              | 0  |
| Lens Diameter (mm/inches)  | 107 / 4¼  | 107 / 4¼   | Vertical Divergence (degrees)                      |
| Lens Design  | Single LED Optic  | Single LED Optic   | -onioar priorgonioe (degrees)                      |
| Mounting   | 4 x 17mm holes on 200mm PCD   | 4 x 17mm holes on 200mm PCD  |  |
| Height (mm/inches)   | 375 / 14¾   | 470 / 181/2  | AV-C310-ILA (6.9")                                 |
| Width (mm/inches)<br>Depth (mm/inches)   | 233 / 9¼<br>233 / 9¼  | 233 / 9¼<br>233 / 9¼   |  |
| Mass (kg/lbs)  | 9.1 / 20  | 13.9 / 301/2   | (/ 1")   |
| Product Life Expectancy  | 12 years plus   | 12 years plus  |  |
| Environmental Factors  |   |  |  |
| Humidity   | 0 to 100%, MIL-STD-810F   | 0 to 100%, MIL-STD-810F  |  |
| lcing  | 3.41kg per square cm /  | 3.41kg per square cm /   |  |
| Wind Constant  | 48.5lbs per square inch   | 48.5lbs per square inch  |  |
| Wind Speed<br>Shock  | Up to 160kph / 100mph<br>MIL-STD-202G, Test Condition G,  | Up to 160kph / 100mph<br>MIL-STD-202G, Test Condition G,             | 14.77  |
| UNUCK  | Method 213B   | Mill-STD-202G, lest Condition G,<br>Method 213B                      |  |
| Vibration  | MIL-STD202G, Test Condition B,  | MIL-STD202G, Test Condition B,                                       |  |
| 0.117  | Method 204  | Method 204   |  |
| Certifications   | EN1/1000 / 0.0007   | EN(1000 ( 2.0007   |  |
| CE   | EN61000-6-3:2007<br>EN61000-6-1:2007  | EN61000-6-3:2007<br>EN61000-6-1:2007                                 |  |
| Quality Assurance  | ISO9001:2008  | ISO9001:2008   |  |
| ICAO   | Low Intensity Obstruction Light   | Low Intensity Obstruction Light                                      | 233  |
|  | Type A - 2009   | Type A - 2009<br>Low Intensity Obstruction Light                     | (9.2")   |
|  |   | Low Intensity Obstruction Light<br>Type B - 2009                     |  |
| Waterproof   | IP68  | IP68   | AV-C410-ILAB                                       |
| Intellectual Property  |   |  | 104  |
| Trademarks   | AVLITE® is a registered trademark   | AVLITE® is a registered trademark                                    | (4.1")   |
| Warranh (*   | of Avlite Systems   | of Avlite Systems  |  |
| Warranty *   | 5 year warranty   | 5 year warranty  |  |
| Options Available  | <ul> <li>IR Controller</li> <li>GSM Cell-Phone Monitoring</li> </ul>  | <ul> <li>IR Controller</li> <li>GSM Cell-Phone Monitoring</li> </ul> |  |
|  | GPS Synchronisation   | GPS Synchronisation  |  |
|  | <ul> <li>IR LED</li> <li>External ON/OFF Switch</li> </ul>  | <ul> <li>IR LED</li> <li>External ON/OFF Switch</li> </ul>           |  |
|  | <ul> <li>External Battery Charging Port</li> </ul>  | External Battery Charging Port                                       |  |
|  | <ul> <li>Solar Booster™</li> </ul>  | • Solar Booster™   |  |
| The AV-SB-10 Sola  | ar Booster™ Mountin   | ng   | 4.70   |
|  | Becolor   | 120° Diam 15.9 x 25.4 slot<br>(0.63" x 1")                           |  |
|  |   |  | 385<br>(f5.2*)                                     |
| can be connected<br>AV-C410-ILAB ligh  | it to provide   |  |  |
| can be connected<br>AV-C410-ILAB ligh<br>additional solar of   | t to provide<br>collection to   |  |  |
| can be connecte<br>AV-C410-ILAB ligh<br>additional solar of<br>charge the batte  | It to provide<br>collection to<br>ery.The Avlite  |  |  |
| can be connecte<br>AV-C410-ILAB ligh<br>additional solar of<br>charge the batte<br>Solar Booster™ co                                       | It to provide<br>collection to<br>ery.The Avlite  | 8: :0  |  |
| can be connected<br>AV-C410-ILAB ligh<br>additional solar ocharge the battle<br>Solar Booster™ oc<br>areas of red<br>to help               | It to provide<br>collection to<br>ory.The Avlite<br>an be used in<br>luced sunlight<br>p ensure                               |  |  |
| can be connected<br>AV-C410-ILAB ligh<br>additional solar of<br>charge the battle<br>Solar Booster™ ca<br>areas of red<br>to hell          | It to provide<br>collection to<br>an be used in<br>luced sunlight<br>p ensure<br>optimum                                      |  |  |
| can be connected<br>AV-C410-ILAB ligh<br>additional solar of<br>charge the battle<br>Solar Booster™ ca<br>areas of red<br>to help          | It to provide<br>collection to<br>ory.The Avlite<br>an be used in<br>luced sunlight<br>p ensure                               |  |  |
| can be connected<br>AV-C410-ILAB ligh<br>additional solar<br>charge the batte<br>Solar Booster <sup>TM</sup> or<br>areas of red<br>to help | It to provide<br>collection to<br>rry. The Avlite<br>an be used in<br>luced sunlight<br>p ensure<br>optimum<br>battery charge |  |  |



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