



# SP-401 SOLAR APPROACH LIGHT



		<b>Compliance:</b> ICAO Annex 14 Vol. I (7th. Edition, July 2016)
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## FEATURES

- Operates 365 days on solar energy
- 5-level protection against system failure
- 180 hrs of autonomy
- 1.800 cd light output

## APPLICATION

Unidirectional optics; designed for permanent usage at airports located in regions without access to electricity and with high photovoltaic potential.

## TECHNICAL SPECIFICATIONS

<b>Optics</b>		<b>Safety &amp; Reliability</b>											
<ul style="list-style-type: none"> <li>• 1.800 cd light output (tested by accredited laboratory)</li> <li>• Unidirectional type</li> <li>• LED lifespan: 100.000 hrs</li> <li>• Maximum power consumption: 3,9W</li> <li>• NVG-compatible (optional)</li> <li>• Color: white</li> <li>• User-replaceable</li> </ul>		<ul style="list-style-type: none"> <li>• Five levels of protection against system failure</li> <li>• Secondary power supply: backup battery</li> <li>• Real-time monitoring via ALCMS (Airfield Lighting Control and Monitoring System)</li> <li>• Emergency ON/OFF button</li> </ul>											
<b>Battery</b>		<b>Environmental Conditions</b>											
<ul style="list-style-type: none"> <li>• 2 x built-in batteries</li> <li>• Autonomy: 180 hrs (minimum intensity)</li> <li>• Total capacity: 216W (2x9Ah/12V)</li> <li>• Deep-cycle VRLA, 12V/9Ah (available worldwide)</li> <li>• Lifespan: 1.200 cycles (designed for 4-5 years)</li> <li>• User-replaceable, air transportable</li> </ul>		<ul style="list-style-type: none"> <li>• Temperature range: -20 to 50 °C (-4 to 122 °F) Optional: -40 to 80 °C (-40 to 176 °F)</li> <li>• Ingress protection: IP-67 (tested by accredited laboratory)</li> <li>• Jet Blast Resistance: 240 kph (tested by accredited laboratory)</li> </ul>											
<b>Solar Power Supply</b>		<b>Compliance</b>											
<ul style="list-style-type: none"> <li>• 20W solar panel, separately installed</li> <li>• Poly- or monocrystalline type</li> <li>• Lifespan: 15 years</li> <li>• MPPT-Temp / Built-in inverter 12-36V/2A</li> </ul>		<table border="1"> <tr> <td data-bbox="810 1317 1098 1406">Photometric &amp; Chromaticity</td> <td data-bbox="1098 1317 1495 1406">ICAO, Annex 14th, Volume I, 7th Edition dated July 2016, clause 5.3.4.8 &amp; clause 5.3.4.9, Appendix 1, Figure A1-1b</td> </tr> <tr> <td data-bbox="810 1406 1098 1507">Jet Blast Resistance</td> <td data-bbox="1098 1406 1495 1507">ICAO, Annex 14th, Volume I, 8th Edition dated July 2018. Doc 9157, Part 6, clause 3.2.2 &amp; clause 4.9.1. FAA AC 150/5345-50B dated September 2007, clause 3.2.2</td> </tr> <tr> <td data-bbox="810 1507 1098 1697">Frangibility</td> <td data-bbox="1098 1507 1495 1697">ICAO Doc 9157 AN901 Aerodrome Design Manual Part 6, 1st Edition dated 2006, clause 4.9 ICAO, Annex 14th, Volume I, 8th Edition dated July 2018, clause 5.3.1.3 FAA AC 150-5345-46E clause 3.4.2.1 FAA AC 150/5220-23, clause 3.2</td> </tr> <tr> <td data-bbox="810 1697 1098 1765">Secondary Power Supply</td> <td data-bbox="1098 1697 1495 1765">ICAO, Annex 14th, Volume I, 7th Edition dated July 2016, clause 8.1.8-8.1.9 &amp; clause 8.1.11</td> </tr> <tr> <td data-bbox="810 1765 1098 1832">CE Declaration of Conformity</td> <td data-bbox="1098 1765 1495 1832">2014/53/EU RED Directive, clauses 3.1a, 3.1b, 3.2 2011/65/EU ROHS Directive, clause 4.1</td> </tr> </table>		Photometric & Chromaticity	ICAO, Annex 14th, Volume I, 7th Edition dated July 2016, clause 5.3.4.8 & clause 5.3.4.9, Appendix 1, Figure A1-1b	Jet Blast Resistance	ICAO, Annex 14th, Volume I, 8th Edition dated July 2018. Doc 9157, Part 6, clause 3.2.2 & clause 4.9.1. FAA AC 150/5345-50B dated September 2007, clause 3.2.2	Frangibility	ICAO Doc 9157 AN901 Aerodrome Design Manual Part 6, 1st Edition dated 2006, clause 4.9 ICAO, Annex 14th, Volume I, 8th Edition dated July 2018, clause 5.3.1.3 FAA AC 150-5345-46E clause 3.4.2.1 FAA AC 150/5220-23, clause 3.2	Secondary Power Supply	ICAO, Annex 14th, Volume I, 7th Edition dated July 2016, clause 8.1.8-8.1.9 & clause 8.1.11	CE Declaration of Conformity	2014/53/EU RED Directive, clauses 3.1a, 3.1b, 3.2 2011/65/EU ROHS Directive, clause 4.1
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<b>Control &amp; Monitoring</b>		<b>Accredited Laboratory Testing</b>											
<ul style="list-style-type: none"> <li>• Wireless mesh type network</li> <li>• Operating frequency: 868 MHz (optional 2.4GHz or 433 Mhz)</li> <li>• Operating range: up to 1.5 km, relayed (each light is a repeater)</li> <li>• Operating Modes: Steady / Flashing / Dusk till dawn Visible / Infrared (optional) / Visible + Infrared (optional)</li> <li>• Activation options: Via ALCMS Computer Interface (requires UR-201) Via UR-201 Control &amp; Monitoring Unit Via UR-101 Handheld Controller</li> </ul>		<table border="1"> <tr> <td data-bbox="810 1865 1098 1921">Photometric &amp; Chromaticity</td> <td data-bbox="1098 1865 1495 1921">Intertek Laboratory</td> </tr> <tr> <td data-bbox="810 1921 1098 1977">Jet Blast Resistance</td> <td data-bbox="1098 1921 1495 1977">Warsaw Institute of Aviation The Laboratory of Aerodynamics</td> </tr> <tr> <td data-bbox="810 1977 1098 2022">Frangibility</td> <td data-bbox="1098 1977 1495 2022">Laborex Research Laboratory</td> </tr> <tr> <td data-bbox="810 2022 1098 2067">Ingress Protection</td> <td data-bbox="1098 2022 1495 2067">EMAG Institute of Innovative Technologies</td> </tr> <tr> <td data-bbox="810 2067 1098 2098">Electromagnetic Compatibility</td> <td data-bbox="1098 2067 1495 2098">Military Institute of Armament Technology</td> </tr> </table>		Photometric & Chromaticity	Intertek Laboratory	Jet Blast Resistance	Warsaw Institute of Aviation The Laboratory of Aerodynamics	Frangibility	Laborex Research Laboratory	Ingress Protection	EMAG Institute of Innovative Technologies	Electromagnetic Compatibility	Military Institute of Armament Technology
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<b>Casing &amp; Components</b>													
<ul style="list-style-type: none"> <li>• Materials Dome: glass, UV-resistant Casing: Lexan polycarbonate, UV-stabilized Mounting: galvanized steel (optional: marine grade stainless steel) Frangible mounting: aluminum (tested by accredited laboratory)</li> <li>• Detachable antenna</li> <li>• Pressure stabilizing valve</li> <li>• Battery level indicator</li> <li>• Carrying handle (optional)</li> <li>• Casing lifespan: 15 years</li> <li>• Dimensions (LxWxH): 549 mm x 450 mm x 431 mm</li> <li>• Weight: 12,4 kg</li> </ul>													

