



SP-401S SOLAR RTIL LIGHT

RUNWAY THRESHOLD IDENTIFICATION LIGHT



		Compliance: 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
- 690 hrs of light autonomy
- 1.200 cd light output

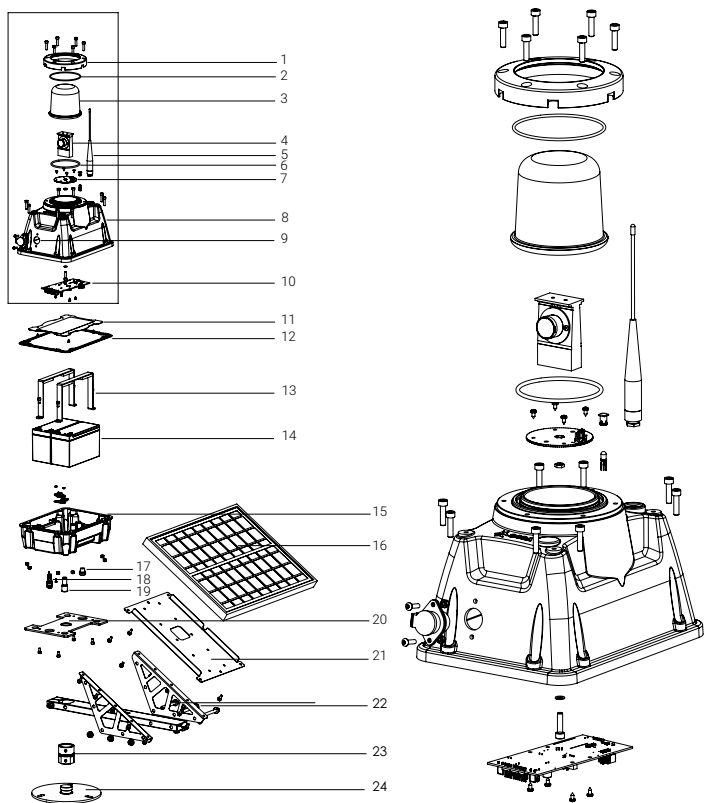
APPLICATION

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

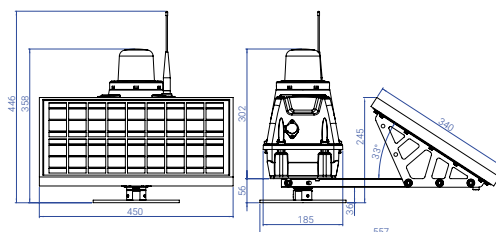
TECHNICAL SPECIFICATIONS

Optics		Safety & Reliability	
<ul style="list-style-type: none"> • 1.200 cd light output (tested by accredited laboratory) • Unidirectional type • Vertical adjustment: 0 - 10° • Horizontal adjustment: 0 - 180° • LED lifespan: 100.000 hrs • Maximum power consumption: 3,9W • NVG-compatible, Infrared LEDs (optional) • Color: white • User-replaceable 		<ul style="list-style-type: none"> • Five levels of protection against system failure • Secondary power supply: backup battery • Real-time monitoring via ALCMS (Airfield Lighting Control and Monitoring System) • Emergency ON/OFF button 	
Battery		Environmental Conditions	
Standard battery	<ul style="list-style-type: none"> • 2x built-in batteries, user-replaceable, air transportable • Autonomy: 690 hrs (minimum intensity) • Total capacity: 216W (2x9Ah/12V) • Deep-cycle VRLA, 12V/9Ah (available worldwide) • Lifespan: 1.200 cycles (designed for 4-5 years) 	<ul style="list-style-type: none"> • Temperature range: -20 to 50 °C (-4 to 122 °F) Optional: -40 to 80 °C (-40 to 176 °F) • Ingress protection: IP-67 (tested by accredited laboratory) • Impact Resistance: IK-10 (tested by accredited laboratory) • Jet Blast Resistance: 240 kph (tested by accredited laboratory) 	
Cyclon battery (Arctic Pack)	<ul style="list-style-type: none"> • 1x built-in battery, user-replaceable, air transportable • Autonomy: 380 hrs (minimum intensity) • Total capacity: 120W (10Ah/12V) • Lifespan: 300 cycles (designed for 10-15 years) 	Compliance	
Solar Power Supply		Photometric & Chromaticity	ICAO, Annex 14th, Volume I, 7th Edition dated July 2016, clause 5.3.8.3 & clause 5.3.8.4, Appendix 1, Figure A1-1b
<ul style="list-style-type: none"> • 20W solar panel, separately installed • Polycrystalline type (optional: monocrystalline) • Lifespan: 15 years • MPPT-Temp / Built-in inverter 12-36V/2A 		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
Control & Monitoring		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
<ul style="list-style-type: none"> • Wireless mesh type network • Operating frequency: 868 MHz (optional 2.4GHz or 433 Mhz) • Operating range: up to 1.5 km, relayed (each light is a repeater) • Operating Modes: Steady / Flashing / Dusk till dawn Visible / Infrared (optional) / Visible + Infrared (optional) • Activation options: Via ALCMS Computer Interface (requires UR-201) Via UR-201 Control & Monitoring Unit Via UR-101 Handheld Controller 		Secondary Power Supply	ICAO, Annex 14th, Volume I, 7th Edition dated July 2016, clause 8.1.8-8.1.9 & clause 8.1.11
Casing & Components		CE Declaration of Conformity	2014/53/UE RED Directive, clauses 3.1a, 3.1b, 3.2 2011/65/UE ROHS Directive, clause 4.1
Materials	<ul style="list-style-type: none"> • Dome: glass, UV-resistan • Casing: Lexan polycarbonate, UV-stabilized, color: aviation yellow • Carrying handle: polycarbonate, stainless steel (optional) • Mounting: galvanized steel (optional: marine grade stainless steel Frangible mounting: aluminum (tested by accredited laboratory) 	Accredited Laboratory Testing	
<ul style="list-style-type: none"> • Detachable antenna • Pressure stabilizing valve, transportation fuse • Battery level indicator • Carrying handle (optional) • Casing lifespan: 15 years • Dimensions (LxWxH): 557 mm x 450 mm x 358 mm • Weight: 12,4 kg 		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
		Impact Resistance	Laborex Research Laboratory
		Electromagnetic Compatibility	Military Institute of Armament Technology

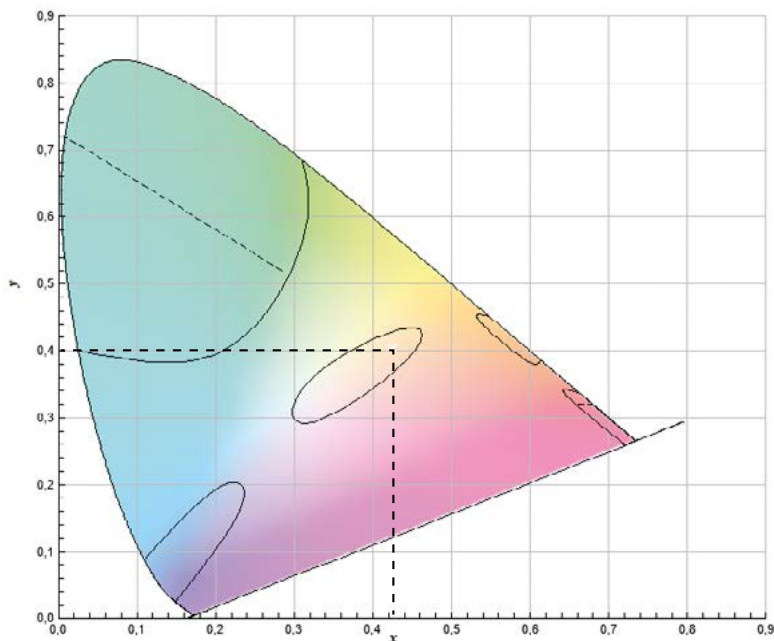
TECHNICAL DRAWING



1. Adapter for glass dome
2. O-ring for the glass dome
3. Glass dome
4. LED optics
5. Radio antenna for wireless control & monitoring
6. O-ring under the glass dome
7. PCB board
8. Casing upper part
9. Charging port
10. Micro-computer with integrated radio transceiver
11. Protective plate
12. Rubber gasket
13. Battery holder
14. 2x batteries built-in, VRLA type 12V/9Ah
15. Casing bottom part
16. 20W Solar panel with standard optimal inclination
17. Pressure stabilizing valve
18. Emergency ON/OFF button
19. Transportation fuse
20. Mounting plate
21. Holding frame for solar panel
22. Holder for solar panel frame
23. Frangible coupling
24. Base plate



CHROMATICITY PERFORMANCE



SHIPPING DATA

Item	Dimensions of Package (LxWxH)	Gross Weight
SP-401 Lighting Unit	630 mm x 270 mm x 380 mm	15 kg
SP-401 Lighting Unit, NO BATTERIES	630 mm x 270 mm x 380 mm	9,8 kg