

SP-301S SOLAR OBSTACLE LIGHT TYPE A, LOW-INTENSITY

The S4GA solar aviation obstacle light (ICAO-unserviceable area light) is designed for temporary or permanent use at airports of any type and size. Built for reliable operation in a wide range of climatic conditions and does not require connection to electrical infrastructure.

KEY FEATURES

- Self-Contained
- Solar-Powered
- Radio-Controlled (optional)
- Compliant with ICAO, FAA, EASA, CASA, CAA, TCCA, SAE, NATO STANAG

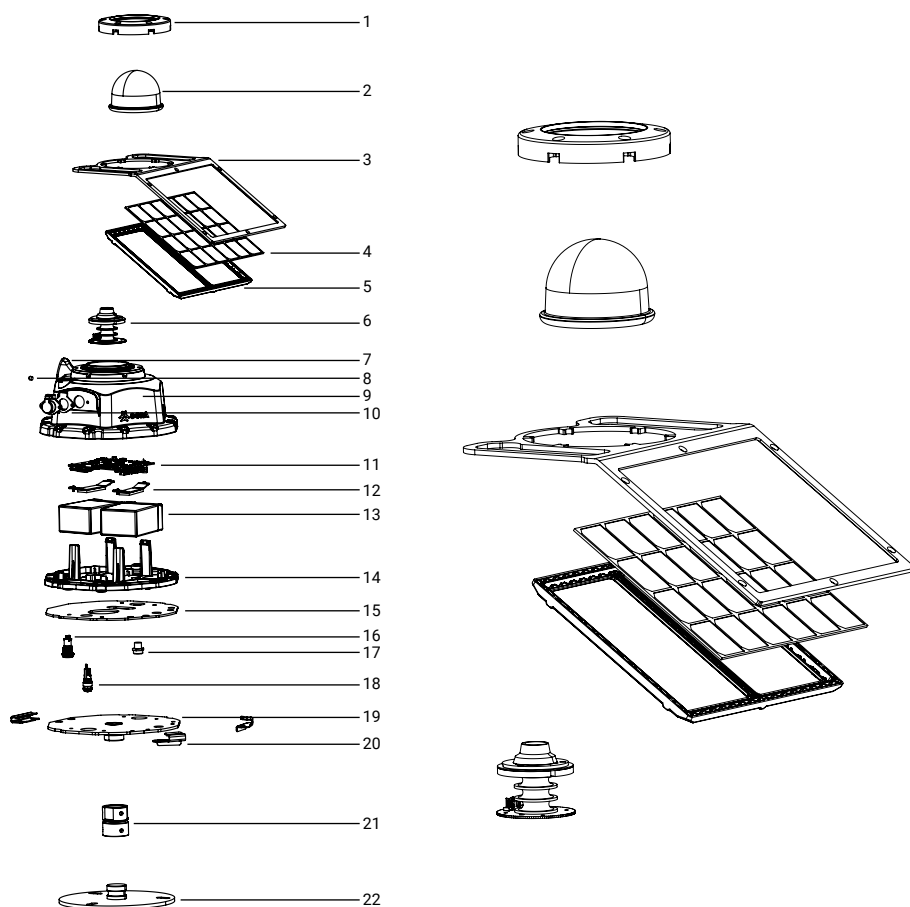


TECHNICAL SPECIFICATIONS

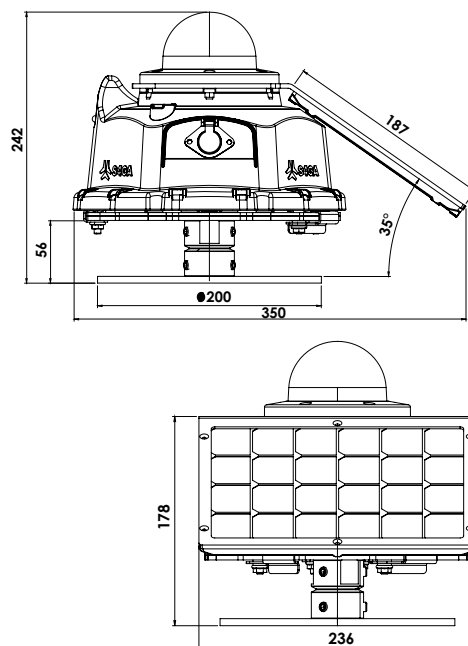
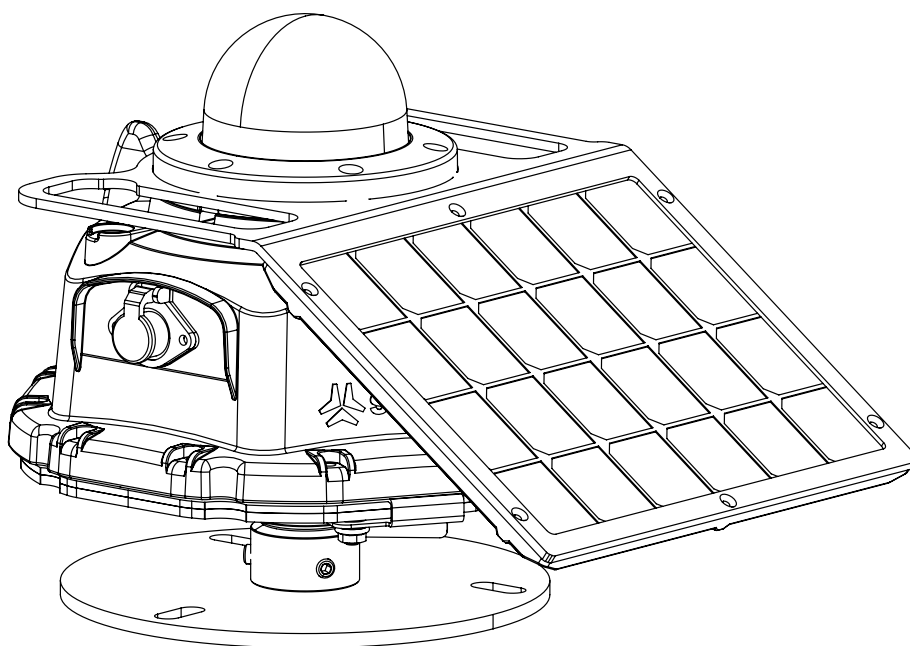
Optics	
• Color: red	
• 40 cd light output	
• Omnidirectional type	
• LED lifespan: 100.000 hrs	
• Maximum power consumption: 0.84 W	
• NVG-compatible, Infrared LEDs (optional)	
• User-replaceable	
Battery	
• 2x built-in batteries, LiFePO4, 6.4 V / 5 Ah	
• Autonomy: 140 hrs (30% intensity)	
• Total capacity: 64 Wh	
• Lifespan: 3,000 cycles (designed for 6-7 years)	
Solar Power Supply	
• 6 W solar panel	
• Monocrystalline type (optional: polycrystalline)	
• Lifespan: 15 years	
• MPPT-Temp / Built-in inverter 12-36 V / 2 A	
Control & Monitoring	
Activation via button	Yes
Operating modes	Steady / Flashing / Dusk-to-dawn Visible / Infrared (optional) / Visible + Infrared (optional)
Brilliance	10%, 30%, 100% (optional: 5-step intensity setup)
Manual Control (standard version)	Multifunctional button settings: switch ON/OFF brilliance 5-step intensity setup operating mode setup Retains last selected operating mode: Yes
Radio-Control (optional)	Switch ON/OFF Grouping of the lights: unlimited Brilliance setup by group Operating mode setup by group Activation options: Via UR-101 Handheld Controller Via UR-201 CMU, via ALCMS Communication: radio mesh network Frequency: 868 MHz (optional 915 MHz, 2.4 GHz) Radio communication range: > 10 km (relayed)
Individual Light Monitoring (optional)	Yes (requires ALCMS Computer interface)
Environmental Conditions	
• Temperature range: -20 to 50 °C (-4 to 122 °F) Optional: -40 to 80 °C (-40 to 176 °F)	
• Ingress Protection: IP68	
• Impact Resistance: IK10	
• Jet Blast Resistance: 240 kph	

Safety & Reliability	
• Five levels of protection against system failure	
• Secondary power supply: backup battery	
• Real-time monitoring via ALCMS (optional)	
Casing & Components	
• Light body materials Dome: borosilicate hardened glass, UV-resistant Casing: Lexan polycarbonate, UV-stabilized, color: aviation yellow	
• Mounting components Material: marine grade stainless steel Frangible coupling material: aluminum Type: permanent / quick release (optional)	
• Charging port: one port / two ports (optional) / drop-in charging port (optional)	
• Built-in antenna / external antenna (optional)	
• Pressure stabilizing valve, transportation fuse	
• Battery level indicator	
• Carrying handle	
• Casing lifespan: 15 years	
• Dimensions (L x W x H): 350 mm x 236 mm x 242 mm	
Compliance	
Photometric & Chromaticity	ICAO Annex 14, Volume I, 9th Edition dated July 2022, Tables 6-1 & 6-2, Figure A1-1b
	EASA CS-ADR-DSN, Tables Q-1 & Q-2, Figure U1-B
	CASA Part 139 (Aerodromes) Manual of Standards 2019, Section 9.32 (2), Figure 9.15
	FAA AC 150/5345-43J, Section 3.3.3 – Chromaticity
	FAA AC 150/5345-50B, Section 3.3.1 – Chromaticity
	CAA CAP 168, Tables 4.2 & 4.4, Figure 6A.23
	TCCA TP312, Section 5.3.32.7 & Fig. A1-(b)
	SAE AS25050B, Table 3 – Chromaticity
Jet Blast Resistance	NATO STANAG 3346 / AATMP-08, Section 1.1.2
	NATO STANAG 3316 / AATMP-07, Section 8.3
Frangibility	ICAO Doc 9157 AN901 Aerodrome Design Manual Part 6, 1st Edition dated 2006, clauses 3.2.2 & 4.9.1
	FAA AC 150/5345-50B, Section 3.2.2
Secondary Power Supply	ICAO Doc 9157 AN901 Aerodrome Design Manual Part 6, 1st Edition dated 2006, clause 4.9
	ICAO Annex 14, Volume I, 9th Edition dated July 2022, clause 5.3.1.3
	FAA AC 150/5345-46F, Section 3.4.2.1
CE Declaration of Conformity	FAA AC 150/5220-23A, Section 3.2
	ICAO Annex 14, Volume I, 9th Edition dated July 2022, clauses 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 (applicable to the optional radio-equipped version)
	2011/65/EU ROHS Directive, clause 4.1

TECHNICAL DRAWING



1.	Adapter for the glass dome
2.	Glass dome
3.	Carrying handle / Solar panel frame
4.	6 W solar panel with standard optimal inclination
5.	Solar panel frame
6.	LED optics
7.	S4GA antenna (optional)
8.	Status LED
9.	Casing (upper part)
10.	Charging port
11.	Main PCB
12.	Battery holders
13.	Batteries
14.	Casing (bottom part)
15.	Quick release / Mounting plate (optional)
16.	ON/OFF button
17.	Pressure equalizing valve
18.	Transport fuse
19.	Mounting plate
20.	Quick release handles (optional)
21.	Frangible coupling
22.	Concrete base plate



SHIPPING DATA

Item	Dimensions of Package (L x W x H)	Gross Weight
SP-301 Lighting Unit with solar panel (NO batteries)	380 mm x 260 mm x 245 mm	3,88 kg
SP-301 Lighting Unit with solar panel (LiFePO4 batteries)	380 mm x 260 mm x 245 mm	4,58 kg

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