SP-401 SOLAR TAXIWAY EDGE LIGHT, TURNING PAD LIGHT

Compliance:
ICAO Annex 14 Vol. I (7th. Edition, July 2016)

FEATURES

- Operates 365 days on solar energy
- 5-level protection against system failure
- 600 hrs of autonomy

APPLICATION

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

TECHNICAL SPECIFICATIONS

Optics

- 11 cd light output (tested by accredited laboratory)
- Omnidirectional type
- LED lifespan: 100.000 hrs
- Maximum power consumption: 0,6W
- NVG-compatible (optional)
- Color: blue
- User-replaceable

Battery

- 2 x built-in batteries
- Autonomy: 600 hrs (minimum intensity)
- Total capacity: 216W (2x9Ah/12V)
- Deep-cycle VRLA, 12V/9Ah (available worldwide)
- Lifespan: 1.200 cycles (designed for 4-5 years)
- User-replaceable, air transportable

Solar Power Supply

- 20W solar panel, separately installed
- Poly- or monocrystalline type
- Lifespan: 15 years
- MPPT-Temp / Built-in inverter 12-36V/2A

Control & Monitoring

- 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

Casing & Components

- 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)
- Detachable antenna
- Pressure stabilizing valve
- Battery level indicator
- Carrying handle (optional)
- Casing lifespan: 15 years
- Dimensions (LxWxH): 549 mm x 450 mm x 431 mm
- Weight: 12,4 kg

Safety & Reliability

- 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

Environmental Conditions

- 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)
- Jet Blast Resistance: 240 kph (tested by accredited laboratory)

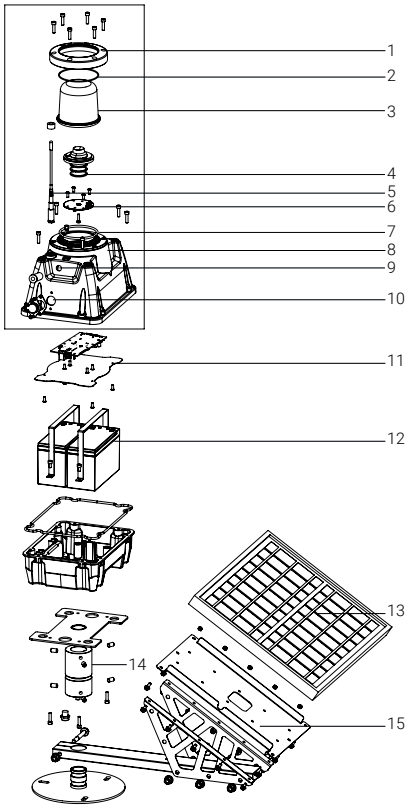
Compliance

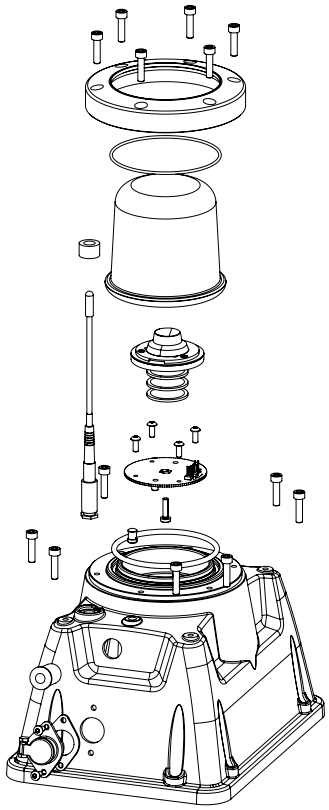
Photometric & Chromaticity	ICAO, Annex 14th, Volume I, 7th Edition dated July 2016, clause 5.3.18.7 & clause 5.3.18.8, Appendix 1, Figure A1-1b
Jet Blast Resistance	ICAO, Annex 14th, Volume I, 8th Edition dated July 2018. Doc 9157, Part 6, clause 3.2.2 & clause 4.9.1.
	FAA AC 150/5345-50B dated September 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/UE RED Directive, clauses 3.1a, 3.1b, 3.2
	2011/65/UE ROHS Directive, clause 4.1

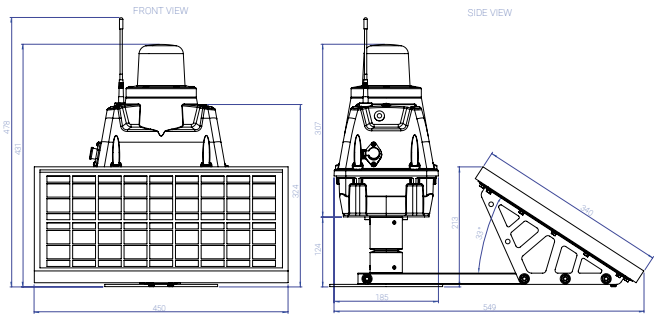
Accredited Laboratory Testing

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

TECHNICAL DRAWING

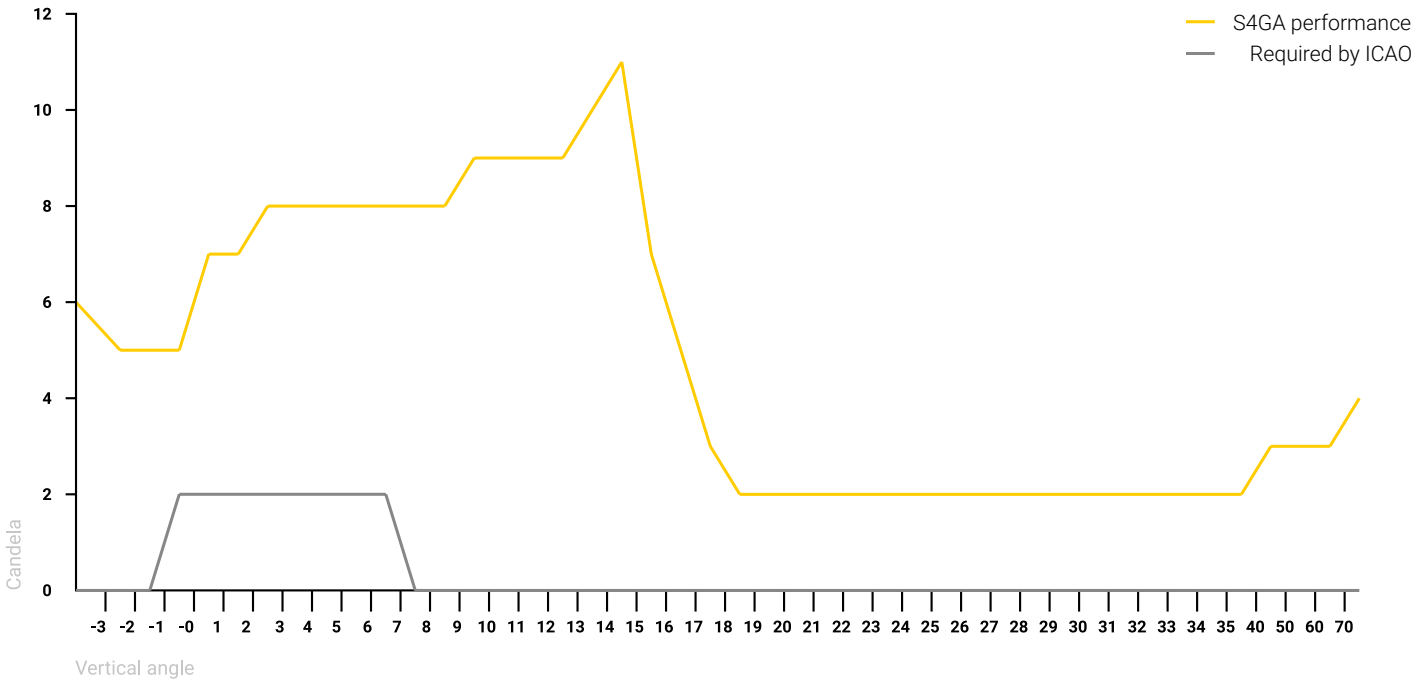






1.	Aluminum adapter for glass dome
2.	Rubber protection
3.	Glass dome
4.	LED optics, omnidirectional type
5.	Radio antenna for wireless control & monitoring
6.	Micro-computer with integrated radio transceiver
7.	Rubber protection
8.	UV-stabilized Lexan polycarbonate casing
9.	Emergency ON/OFF button
10.	Charging port for solar panel
11.	Protective plate
12.	2 x batteries built-in, VRLA type 12V/9Ah
13.	20W Solar panel with standard optimal inclination
14.	Frangible mounting
15.	Solar holder

PHOTOMETRIC PERFORMANCE



SHIPPING DATA

Item	Dimensions of Package (LxWxH)	Gross Weight
SP-401 Lighting Unit	490 mm x 360 mm x 570 mm	14,8 kg
SP-401 Lighting Unit, NO batteries	490 mm x 360 mm x 570 mm	9,6 kg