



SP-401P PORTABLE RUNWAY END LIGHT

MEDIUM INTENSITY



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

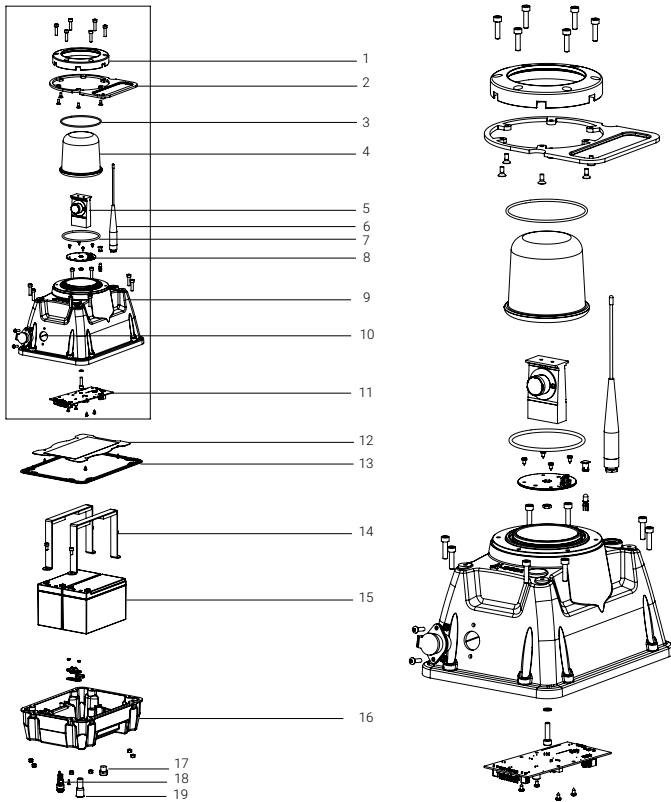
- 380 hrs of autonomy
- Remote activation
- Convertible to solar airfield light

APPLICATION

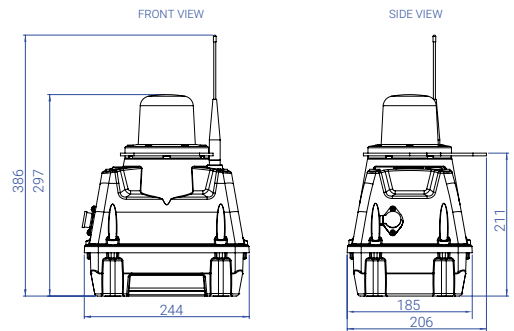
- Mobile airfield light designed to quickly illuminate temporary airfield in accordance with ICAO:
- Temporary runways
 - Remote airfields
 - Backup airport lighting
 - Emergency landing airstrips

TECHNICAL SPECIFICATIONS

Optics		Safety & Reliability	
<ul style="list-style-type: none"> • 320 cd light output (tested by accredited laboratory) • Unidirectional type • LED lifespan: 100.000 hrs • Maximum power consumption: 1,8W • NVG-compatible, Infrared LEDs (optional) • Color: red • 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: 380 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: 210 hrs (minimum intensity) • Total capacity: 120W (10Ah/12V) • Lifespan: 300 cycles (designed for 10-15 years) 	Compliance	
Charging		Photometric & Chromaticity	ICAO, Annex 14th, Volume I, 7th Edition dated July 2016, clause 5.3.11.4 Appendix 1, Figure A1-1b
<ul style="list-style-type: none"> • Via OCT-401 Charger (charging time: 8 hrs) • Contactless charging in a Trailer (charging time: 8 hrs) • Optional: solar power supply 		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
Remote Activation & Control		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: <ul style="list-style-type: none"> • Steady / Flashing / Dusk till dawn • Visible / Infrared (optional) / Visible + Infrared (optional) Remote activation: <ul style="list-style-type: none"> • Via UR-101 Handheld Controller • Via UR-201 Control & Monitoring Unit <ul style="list-style-type: none"> GSM activation (Cell Phone) VHF activation (Air-band Radio) • Via ALCMS Computer Interface (requires UR-201) 		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) • Detachable antenna • Pressure stabilizing valve, transportation fuse • Battery level indicator • Transport circuit breake • Casing lifespan: 15 years • Optional: frangible mounting (tested by accredited laboratory) • Dimensions (LxWxH): 244 mm x 185 mm x 297 mm • Weight: 7 kg 	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
		Impact Resistance	Laborex Research Laboratory
		Electromagnetic Compatibility	Military Institute of Armament Technology



- 1. Adapter for glass dome
- 2. Carrying handle
- 3. O-ring for the glass dome
- 4. Glass dome
- 5. LED optics
- 6. Radio antenna for wireless control & monitoring
- 7. O-ring under the glass dome
- 8. PCB board
- 9. Casing upper part
- 10. Charging port
- 11. Main micro-computer with integrated radio transceiver
- 12. Protective plate
- 13. Rubber gasket
- 14. Battery holder
- 15. 2x batteries built-in, VRLA type 12V/9Ah
- 16. Casing bottom part
- 17. Pressure stabilizing valve
- 18. Emergency ON/OFF button
- 19. Transportation fuse



PHOTOMETRIC PERFORMANCE

Red																SP-401 RUNWAY END																
TEST AREA																REQUIRED				RESULTS												
12°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	36	36	35	35	35	35	-	-	-	AREA 1 (BLUE PART)	MIN. 20 CD AVERAGE MIN. 50 CD	MIN. 149,79 CD AVG. 328,16 CD MAX. 447 CD				
11,5°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	41	41	40	40	40	40	39	40	39	39				AREA 2 (YELLOW PART)	MIN. 10 CD	MIN. 76,98 CD	
11°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	46	46	46	46	46	46	45	45	45	45							44
10,5°	-	-	-	-	-	-	-	-	-	52	52	53	53	52	52	53	52	53	52	52	52	52	51	52	50	50	49	49	AREA 3 (PINK PART)	MIN. 5 CD	MIN. 35,06 CD	
10°	-	-	-	-	-	-	-	-	-	61	60	61	61	62	61	62	61	61	60	60	61	59	59	59	58	58	57	57				56
9,5°	-	-	-	-	-	-	70	71	71	71	71	72	72	71	71	71	71	71	71	70	70	70	69	68	68	67	67	67	67			
9°	-	-	-	-	-	82	83	83	83	84	85	85	84	84	84	83	83	83	81	81	81	81	80	80	78	78	78	77	77			
8,5°	-	-	-	95	96	97	98	97	98	99	99	100	99	99	100	99	99	99	97	96	95	95	94	94	92	92	91	90	90			
8°	-	-	112	112	113	113	113	114	115	116	115	116	115	116	114	115	115	113	113	112	112	110	110	108	108	107	106	106	106			
7,5°	-	-	130	131	130	131	132	132	134	135	134	135	136	135	136	136	135	134	133	132	130	129	129	128	126	125	125	125				
7°	-	149	150	150	152	152	154	154	154	155	154	156	157	157	156	155	158	157	156	155	152	152	150	150	149	148	147	145	143			
6,5°	-	173	174	175	176	176	178	179	180	179	179	181	180	183	182	181	181	180	178	176	176	172	172	171	169	168	167	165	164			
6°	-	195	195	198	199	200	201	203	203	206	207	209	206	208	208	208	206	205	205	203	202	200	198	197	195	194	191	191	190			
5,5°	-	221	221	223	225	227	227	230	230	235	233	235	236	238	234	235	235	235	232	232	230	227	226	222	221	220	217	220	216			
5°	246	247	248	248	251	252	253	257	259	260	262	262	264	265	263	263	262	260	259	259	256	253	251	251	252	248	248	245	243			
4,5°	269	270	272	277	280	280	279	284	287	290	292	292	293	297	294	296	295	292	290	287	288	285	283	281	282	281	279	272	271			
4°	295	297	297	300	304	305	308	310	314	318	320	321	322	323	323	324	320	322	319	319	319	316	313	310	311	310	310	307	304			
3,5°	320	320	322	324	326	325	332	337	339	342	346	349	351	352	349	352	351	352	346	348	344	344	342	338	339	338	338	336	334			
3°	338	340	344	347	353	355	359	361	365	365	367	370	372	379	380	380	378	378	372	370	369	368	369	363	363	362	363	361	361			
2,5°	351	356	363	365	369	374	379	386	389	390	390	390	394	395	401	405	399	399	394	394	395	395	396	390	391	389	389	390	387			
2°	366	372	372	378	379	387	388	393	400	403	406	414	418	417	415	415	413	418	421	419	413	413	417	414	413	411	410	410	407			
1,5°	-	378	383	388	391	398	402	405	409	414	417	423	422	428	427	430	429	434	434	428	429	427	427	426	426	428	423	423				
1°	-	384	386	393	396	400	408	413	416	420	422	428	433	437	435	437	437	439	439	440	438	437	440	442	442	439	436	433				
0,5°	-	383	387	393	398	405	406	413	418	422	428	431	434	437	438	444	441	442	444	447	447	446	440	437	440	440	447	447				
0°	-	-	381	387	392	394	398	407	410	418	423	427	428	431	431	435	438	441	439	442	442	438	436	438	437	439	440	440				
V/H	10	9,5	-9	-8,5	-8	-7,5	-7	-6,5	-6	-5,5	-5	-4,5	-4	-3,5	-3	-2,5	-2	-1,5	-1	-0,5	0	0,5	1	1,5	2	2,5	3	3,5				

SHIPPING DATA

Item	Dimensions of Package (LxWxH)	Gross Weight
SP-401 Lighting Unit	270 mm x 210 mm x 370 mm	8,2 kg
SP-401 Lighting Unit, NO batteries	270 mm x 210 mm x 370 mm	3 kg