

SP-401S SOLAR APPROACH LIGHT





The S4GA solar approach lights provide a permanent, reliable lighting solution for civil and military airports, while also serving as a backup system for airports with wired lighting infrastructure.

KEY FEATURES

- · Solar-Powered
- · Radio-Controlled
- · Individual Light Status Monitoring





Casing & Components





· Light body materials









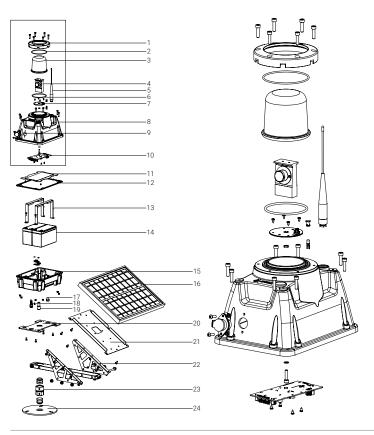
TECHNICAL SPECIFICATIONS

Optics										
• Color: wh	ite									
• 1.800 cd	light output (tested by accredited laboratory)									
Unidirecti	ional type									
• LED lifesp	• LED lifespan: 100.000 hrs									
Maximum	n power consumption: 3.9 W									
• NVG-com	npatible, Infrared LEDs (optional)									
• User-repl	aceable									
Battery										
Lead Acid (Standard)	2x built-in batteries, user-replaceable, air transportable Autonomy: 180 hrs (30% intensity) Total capacity: 216 Wh (2 x 9 Ah / 12 V) Deep-cycle VRLA, 12 V / 9 Ah (available worldwide) Lifespan: 1,200 cycles (designed for 4-5 years)									
Li-ion	2x built-in batteries, user-replaceable, air transportable Autonomy: 340 hrs (30% intensity) Total capacity: 408 Wh (2 x 17 Ah / 12 V) Li-ion, 12 V / 17 Ah Lifespan: 3,000 cycles (designed for 6-7 years) 2x built-in batteries, user-replaceable, air transportable Autonomy: 240 hrs (30% intensity) Total capacity: 288 Wh (2 x 12 Ah / 12 V) LiFePO4, 12 V / 12 Ah Lifespan: 3,000 cycles (designed for 6-7 years)									
LiFeP04										
Lead Acid Cyclon (Arctic Pack)	1x built-in battery, user-replaceable, air transportable Autonomy: 100 hrs (30% intensity) Total capacity: 120 Wh (10 Ah / 12 V) Lifespan: 300 cycles (designed for 10-15 years)									
Solar Power Supply										
• 25 W sola	ar panel, separately installed									
Polycryst	alline type (optional: monocrystalline)									
• Lifespan:	15 years									
• MPPT-Te	mp / Built-in inverter 12-36 V / 2 A									
Control & Monitoring										
Communication	Wireless mesh type network									
Operating frequency	868 Mhz (optional 915 Mhz, 2.4 Ghz)									
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									
Safety & Reliability										
• Five level	s of protection against system failure									
• Secondar	ry power supply: backup battery									
	e monitoring via ALCMS Lighting Control and Monitoring System)									
 Emergency ON/OFF button 										

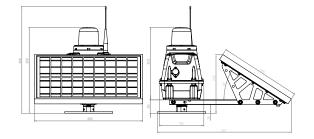
	materials psilicate hardened glass, UV-resistant tan polycarbonate, UV-stabilized,color: aviation yellow					
Frangible co	omponents arine grade stainless steel oupling material: aluminum (tested by accredited laboratory) anent / quick release (optional)					
	ort: one port / two ports (optional) / rging port (optional)					
• Detachable	antenna					
Pressure st	abilizing valve, transportation fuse					
Battery leve	el indicator					
Carrying ha	andle (optional)					
Casing lifes	span: 15 years					
Dimension:	s (LxWxH): 557 mm x 450 mm x 358 mm					
Environmental Conditions						
	re range: -20 to 50 °C (-4 to 122 °F) 10 to 80 °C (-40 to 176 °F)					
• Ingress Pro	• Ingress Protection: IP-68 (tested by accredited laboratory)					
• Impact Res	sistance: IK-10 (tested by accredited laboratory)					
• Jet Blast R	esistance: 240 kph (tested by accredited laboratory)					
Compliance						
Photometric & Chromaticity	ICAO, Annex 14th, Volume I, 9th Edition dated July 2022, clause 5.3.4.8 & clause 5.3.4.9, Appendix 1, Figure A1-1b					
Jet Blast Resistance	ICAO Doc 9157 AN901 Aerodrome Design Manual Part 6, 1st Edition dated 2006, clause 3.2.2 & clause 4.9.1.					
Jet Blast Resistance	FAA AC 150/5345-50B dated September 2007, clause 3.2.2					
	ICAO Doc 9157 AN901 Aerodrome Design Manual Part 6, 1st Edition dated 2006, clause 4.9					
Frangibility	ICAO Doc 9157 AN901 Aerodrome Design Manual Part 6, 1st Edition dated 2006, 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, clauses 8.1.8-8.1.9 & clause 8.1.11					
050 1 " 60 6 "	2014/53/EU RED Directive, clauses 3.1a, 3.1b, 3.2					
CE Declaration of Conformity	2011/65/EU ROHS Directive, clause 4.1					



TECHNICAL DRAWING



- Adapter for the glass dome
- O-ring for the glass dome
- Glass dome
- LED optics
- Radio antenna for wireless control & monitoring
- O-ring under the glass dome
- LED PCB
- Casing (upper part)
- Charging port
- 10. Main PCB
- Protective plate
- 12. Rubber gasket
- 13. Battery holder
- 14. 2x batteries built-in
- 15. Casing (bottom part)
- 16. 25 W solar panel with standard optimal inclination
- 17. Pressure-stabilizing valve
- 18. Transportation fuse
- 19. Emergency ON/OFF button
- 20. Mounting plate
- 21. Holding frame for solar panel
- 22. Holder for solar panel frame
- 23. Frangible coupling
- 24. Base plate



PHOTOMETRIC PERFORMANCE

12°	794	796	802	805	806	797	794	794	791	791	788	785	784	781	777	771	766								715	708	702	696	687	680	SP-401 APPROACH LIGHT LOW I						INTENSITY																								
11,5°	866	868	868	874	876	874	872	872	869	868	863	859	854	851														747	741	733	3 TEST AREA				REQL	IIRED		RESULTS																							
11°	946	948	949	953	955	952	949	948	946	944																					AREA 1				MIN.	25 CD		N	D D																						
10,5°	1025	1030	1032	1034	1034	1032	1031	1030																							(BL	UE PA	RT)	AVG MIN. 50 CD				AVERAGE: 1764.1 CD																							
10°	1110	1114	1118	1119	1119	1121	1123	1120																							AREA 2			AREA 2			AREA 2			AREA 2			AREA 2			AREA 2			AREA 2		AREA 2		AREA 2			10.00		١.		0470	
9,5°	1190	1193	1197	1200	1202																										(YEL	LOW P	ART)	MIN. 10 CD					MIN. 1124.7 CD																						
9°	1262	1267	1268	1274											1242						1189		1170	1161		1144					,	AREA 3			MIN.	ECD		Ι.	MINI 7'	21.7.0																					
8,5°	1336	1345	1348								1347	1341			1323	1314			1286	1275	1263		1242	1233		1209		1190	1178		(PINK PART)		RT)		IVITIN.	300		MIN. 721.7 CD																							
8°	1412	1418	1419						1426		1423	1417	1413		1403	1392			1369	1361	1349	1340	1329	1313		1291	1279	1269	1255	1236	1222	1210								1090	1082																				
7,5°	1476	1489	1490					1501	1501	1500	1501	1497	1493	1486	1479	1474	1466		1452	1440	1426	1417	1407	1395		1369	1360	1350	1335	1325	1311	1296		1269						1176	1155																				
7°	1545		1558					1577	1577	1576	1574	1572	1572	1567	1559	1557	1549		1527	1521	1511	1501	1489	1479		1457	1441	1431	1417	1402	1389	1373	1362	1347						1255	1238																				
6,5*	1600		1614			1639		1631	1634	1634	1636	1635	1634	1634	1632	1624	1618	1609	1598	1596	1589	1577	1566	1553	1543	1530	1518	1507	1496	1483	1469	1458	1447	1431						1341	1323																				
6°	1640		1666			1688		1689	1689	1688	1689	1693	1695	1695	1685	1682	1683	1678	1671	1670	1666	1654	1639	1627	1617	1609	1597	1590	1578	1562	1544	1533		1509	1491		1460			1417	1405																				
5,5°	1679		1705			1731		1736	1741	1743	1743	1746	1746	1746	1744	1745	1738	1734	1728	1724	1718	1708	1703	1696		1677	1669	1661	1648	1636	1623	1609		1579			1539			1495	1484																				
5°			1738	1751					1782		1790	1789	1791		1791				1784	1778	1773		1762	1756		1734		1728	1712		1682	1670								1573	1562																				
4,5°			1761	1771					1808		1819	1818	1819		1825	1830			1821	1818	1816		1812	1809		1791		1772	1759		1740	1730								1634	1627																				
4°			1760	1770					1811		1824	1831	1837		1847	1850			1858	1856	1853		1842	1839		1826		1815	1804		1789	1781								1690	1685																				
3,5°			1744	1764					1811		1827	1838	1841		1854	1859			1861	1860	1866		1866	1864		1855		1847	1836	1831	1828	1817								1753	1735																				
3°			1719	1738					1791		1816	1822	1823		1842	1852			1868	1871	1867		1861	1864		1864		1858	1851	1840	1841	1837								1782	1768																				
2,5°			1683	1702				1749	1762	1773	1785	1794	1806		1823	1830	1836		1846	1850	1855	1861	1861	1864		1861	1864	1862	1859	1856	1848	1848		1844						1804	1787																				
2°			1639	1657		1684			1726	1738	1749	1757	1766	1777	1789	1800	1805		1819	1822	1830	1833	1838	1845		1847	1850	1848	1847	1847	1850	1854					1837			1814	1801																				
1,5°	1545		1580			1634			1679	1691	1704	1719	1732	1744	1751	1759	1771		1783	1789	1796	1801	1807	1814		1815	1819	1824	1833	1833	1828	1827		1827			1818			1810	1803																				
1°	1482		1525		1559	1576	1592	1607	1623	1635	1648	1659	1671	1683	1693	1702	1714	1725	1737	1743	1752	1759	1762	1772	1777	1780	1783	1790	1798	1800	1797	1798	1802	1806	1812	1807	1806			1800	1795																				
0,5*	1405		1442			1496			1545		1571	1580	1597		1623	1633	1644		1665	1672	1679	1686	1694	1704		1711	1717		1729		1746	1755								1759	1755																				
0°	1316	1336	1356					1447	1464	1475	1486	1500	1517	1531	1543	1552	1564		1588	1592	1603	1617	1625	1635		1646	1658	1668	1678	1683	1689	1696	1706	1711						1718	1715																				
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	4	4,5	5	5,5	6	6,5	7	7,5	8	8,5	9	9,5	10																				

SHIPPING DATA

Item	Dimensions of Package (LxWxH)	Gross Weight
SP-401 Lighting Unit with solar panel and mounting set (NO batteries)	630 mm x 270 mm x 380 mm	10.2 kg
SP-401 Lighting Unit with solar panel and mounting set (Lead Acid batteries)	630 mm x 270 mm x 380 mm	15.0 kg
SP-401 Lighting Unit with solar panel and mounting set (LiFePO4 batteries)	630 mm x 270 mm x 380 mm	12.7 kg
SP-401 Lighting Unit with solar panel and mounting set (Li-ion batteries)	630 mm x 270 mm x 380 mm	12.2 kg