

SOLAR LIGHTING

A704

A704 Solar Airfield Light



Standard/Large

Compact

Description

Meets traditional airfield requirements in an easy-to-install, low maintenance package.

- ICAO and FAA compliant
- Omni- and bi-directional options
- Third party tested
- Proven technology platform
- Available in three solar engine sizes

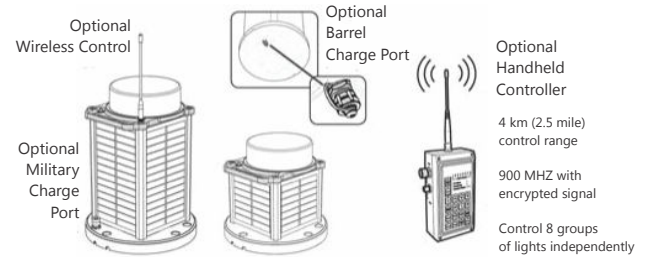
Uses

- Medium-intensity runway edge & threshold (MIRL)
- High-intensity runway edge & threshold (HIRL)
- Taxiway lighting
- NVG operations
- Emergency airfields
- Helipads

Features

- Advanced Design
 - Improved optical efficiency with latest LEDs
 - Up to 25% more power with high-efficiency solar panels
 - Reduced standby power consumption
 - Multiple solar engine sizes for best value-for-performance
- Easy installation: Limited crew, no trenching, no airfield interruptions. Just place the A704 and it emits light dusk-to-dawn while maintaining its battery. Optional wireless control provides on-demand operation from up to 4 km (2.5 m) away.
- Low maintenance: The A704 integrates solar panels, battery, electronics, and LED light source into a compact, stand-alone unit requiring minimal maintenance. The replaceable battery extends service life well beyond five years.
- Reliable: The Energy Management System (EMS) monitors all operations to provide consistent output in the harshest environments. Testing to ICAO, FAA and MIL specifications ensures high performance for many years.
- Trusted: With thousands of installations worldwide, Carmanah solar LED lights operate year-round at permanent airfields and temporary military installations.
- Made in the Canada by Carmanah Technologies Corp., Victoria, BC.

Options

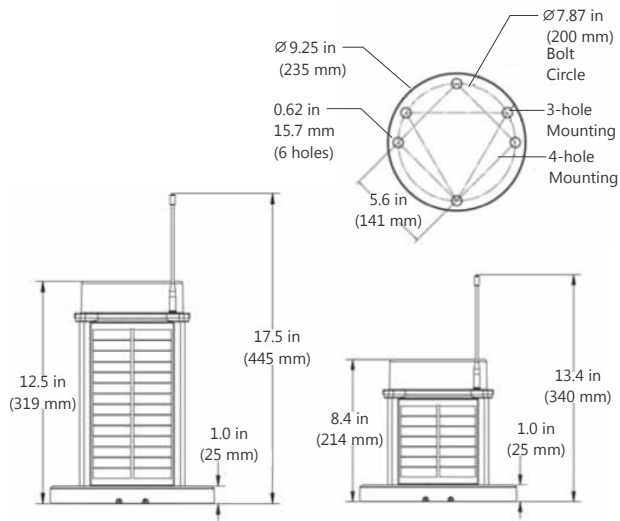


Dimensions and Weights

Standard	
Weight:	6.7 kg (15 lb)
Battery (96E)	4.2V, 24 Ahr
Large	
Weight	10.5 kg (23 lb)
Battery (200BC)	4.2V, 50 Ahr
Compact	
Weight	4.9 kg (11 lb)
Battery (60X)	4.2V, 15 Ahr

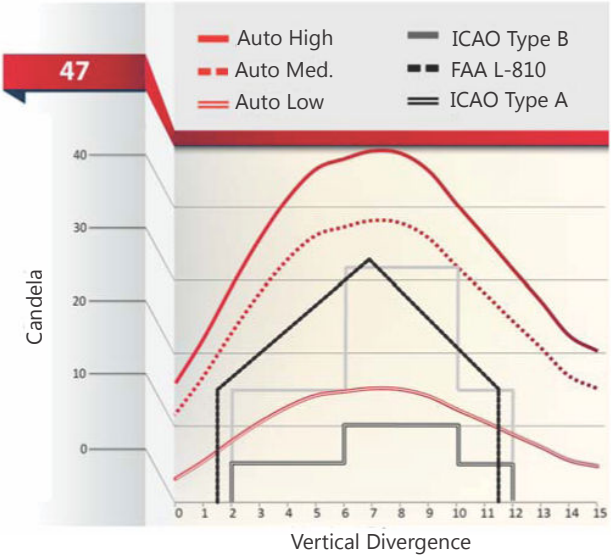
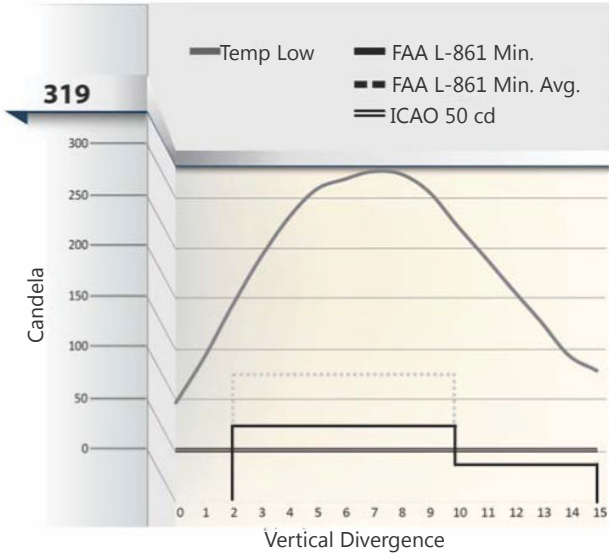
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Equipment Data

Optical	High-power LEDs meet IES LM-80 lumen maintenance, ensuring consistent photo-metrics for life of product
	ICAO, SAE25050 (FAA), and FAA EB 67 compliant chromaticity
	NVG-compatible infrared (IR) LEDs
	Steady-on and flash
Energy Collection	High-efficiency cells with blocking diodes
	Maximum power point tracking with temperature compensation (MPPT-TC) for optimal energy collection in all solar conditions
Energy Storage	Pure-lead VRLAAGM battery with manufacturer operating range -65 to 80 °C (-85 to 176 °F)
	On-board battery status
	Designed for 5+ year battery life; Replaceable and recyclable
	Optional port for battery charging and cabled operation
Energy Management System (EMS)	Intelligent, microprocessor EMS
	On-board diagnostics and datalogger
	Push button interface for local control
	Autonomous, Temporary, and Emergency Modes
Automatic Light Control (ALC)	ALC adjusts output intensity in response to unusually low amounts of sunlight to ensure continued operation
Construction	Premium, UV-resistant polycarbonate lens
	Powder coated aluminum and polycarbonate chassis with integrated handle
	Waterproof, vented battery compartment
Temperature	-22 °F to +122 °F (-30 °C to +50 °C) Optimal
	-40 °F to +176 °F (-40 °C to +80 °C) Max.
Wind & Ice Loading	644 kph (400 mph) wind; 0.03 psi (22 kg/ m2) ice
Shock & Vibration	MIL- STD-202G and MIL- STD-810G
Ingress	EN 60529 IP 67 immersion
	MIL- STD-202G immersion & damp heat cycling
	MIL-STD-810G rain & salt fog
Compliance	CE compliant (non-wireless model only)



Configuration

Model	Output	Solar Engine	Chassis	Control	Charge Port
A704	White / IR White / Yellow / IR Red / Green / IR Blue / IR Green / IR Yellow / IR Red / IR	Compact Standard Large	Yellow Olive Drab	Non-Wireless Wireless	None Charge Port Military Charge Port

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Peak Intensity

	Auto Low (cd)		Auto Medium (cd)		Auto High (cd)		Temp Low (cd)		Temp Medium (cd)		Temp High (cd)	
Runway Edge, Approach, Helipad, FATO¹	Step 1 MIRL		Step 1 MIRL+		Step 2 MIRL		Step 3 MIRL		Step 2 HIRL		Step 3 HIRL	
	19		46		76		319		446	446	578	578
Runway Edge, Caution	Step 1 MIRL		Step 1 MIRL+		Step 2 MIRL		Step 3 MIRL		Step 2 HIRL		Step 3 HIRL	
	19	17	46	42	76	68	175	158	181	163	578	520
Runway Edge, Threshold²	Step 1 MIRL		Step 1 MIRL+		Step 2 MIRL		Step 3 MIRL		Step 2 HIRL		Step 3 HIRL	
	33	14	82	14	130	14	304	18	371	142	567	142
Taxiway and Apron Edge	ICAO/FAA						ICAO/FAA+					
	7		12		18		62		78		107	
Helipad TLOF & FATO			L-860E/HR, TLOF		L-861 FATO							
	26		44		66		218		258		323	
Helipad TLOF & FATO												
	22		36		56		190		235		315	
Obstruction³	ICAO Type A		FAA L-810		ICAO Type B		ICAO Type A		FAA L-810		ICAO Type B	
	15		37		47		15		37		47	
NVG Operations (mW/sr)⁴												
	16		34		80		16		34		80	

Notes

- Third party validation of photometric compliance. Refer to table above for additional details.
- ¹ ICAO MIRL (Annex 14, Vol. 1, 5.3.9.9); FAA L-861 MIRL (AC 150/5345-46, EB67); FAA L-862 HIRL (AC 150/5345-46, EB67), step 3 of 5; Transport Canada MIRL (TP 312, 5.3.10.13)
- ² FAA L-861E & L-861SE MIRL (AC 150/5345-46, EB67); FAA L-862E HIRL (AC 150/5345-46, EB67), step 3 of 5
- ³ ICAO Type A (Annex 14, Vol. 1, 6-3); ICAO Type B (Annex 14, Vol. 1, 6-3); FAA L-810 (AC 150/5345-43, EB67)
- ⁴ FAA L-810 vertical divergence; 850 - 890 nm peak

