

**Description:**

The JCL60F model has four 5 watt (20 watt total) premium-grade solar modules integrated into the solar chassis, and mounted to collect sunlight at all angles, which makes JCL60F a self-contained and care-free light unit and with MPPT (Maximized Power Point Tracking) microcontroller enable this model to maximize solar power output. .

The solar array charges an internal battery during daylight hours, and at dusk the light will automatically begin operation, and also it has an external ON/OFF switch; this means, when in position, the light can be turned on with the flick of a switch.

The rugged design of this self-contained light ensures up to 5-8 years of reliable service with minimal ongoing maintenance. Specifically designed for the harshest of environments, this light features a 7-stage, powder-coated aluminium top, base and Internal chassis in high visibility colors for daytime recognition. The rubber, extruded corners provide additional impact resistance.

The advanced light optic uses a high power LED. The tough polycarbonate light lens is specifically designed for use with LEDs to maximize light intensity and uniformity. The light optic is interchangeable between units, and can be replaced onsite in the unlikely event of damage.

Incorporated SBM (Smart Battery Management) program reduces energy consumption. By detecting ambient solar irradiance, FS810 can self-adjust LED outputs for extending autonomy. It also protects the VRLA battery pack from over-charging and over-discharging.

The light can also be fitted with an optional external charging port for charging the battery while it is stored for extended periods.

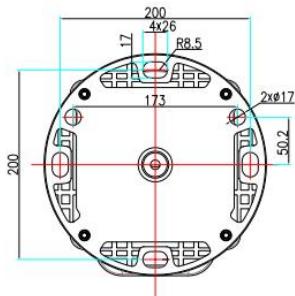
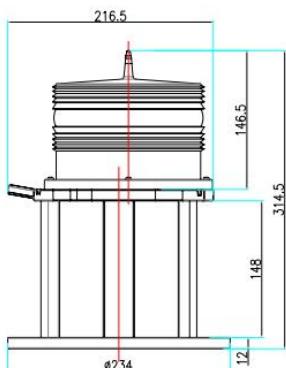
The unit can be supplied in varying color outputs to suit aviation applications including permanent approach, runway edge, threshold, helipad aviation lighting.

In addition to regular visible red color, JCL60F NVG compatible version with IR LEDs or Red/IR dual LEDs is a night vision solution for pilots being able to view obstruction lights using Night Vision Goggles.

The JCL60F is operated by a wireless handheld controller that enables personnel to remotely activate and set specific characteristics of lights within their airfield.

**Features:**

- Equipped with RM01 Radio controller
- Integrated solar/battery system
- Four Internal high-performance solar modules angled to maximize solar collection
- Optional External charger( charging case or add outside solar panel)
- ICAO and FAA compliance
- Improved optical efficiency with latest LEDs
- Fast & easy to deploy-no programming
- IP68 waterproof rating
- Adjustable intensity and sequence flashing
- NVG compatible with IR LEDs or Red/IR dual LEDs
- GPS available for synchronizing flash



Mounting Dimension



### Specifications:

LIGHT OUT-PUT	
Intensity	10-40cd(Can be adjusted by RM01 Handheld Remote Controller)
Frequency	900MHz or 2.4 GHz
LED Color Available	Red,Yellow,Green,white,blue (optional)
Vertical Divergence	10 Degree
Horizontal Out-put	360 Degree
Illumination	Ultra-bright LEDs
LED Lifespan	100,000 Hours
OPERATION	
Autonomy	20 days (flashing) 7 days(steady burning)
Flash Pattern	Steady and Flashing can adjusted
POWER SUPPLY	
Power Source	Solar module, mono-crystalline silicon
Solar Efficiency	14%
Max. Power Out-put	18V/10W
Battery Type	High-efficiency Lithium rechargeable battery
Battery Capacity	12V/10AH
Battery Replacement	Yes, replaceable
MECHANICAL STRUCTURE	
Lens	Polycarbonate, UV Stabilize
Body	Die-casting Aluminum
Construction	IP67(Corrosion-resistant, powder-coated aluminum chassis with integrated handle) Waterproof, vented battery compartment
Net Weight:	4.6kg
Gross Weight	6.5kg
Temperature Range	-40°C ~ +55C°
Dimensions	314.5mm H, 234mm Diameter
Wind load	400 mph (644 kph)
Ice Loading	0.03 psi (22 kg/m²)
Warranty	5 years for light 2 years for lithium battery

**Compliance:**

- Complies to ICAO Annex 14 Volume 1, 'Aerodrome Design and Operations' , Fourth edition July 2018. Runway Edge – paragraph 5.3.9. (photometrics)
- Complies to FAA AC/150-5345-46E-L861, L861E (High Intensity Mode photometrics)
- Appropriate for ICAO Annex 14 Volume 1, 'Aerodrome Design and Operations' , Fourth edition July 2018 – Threshold – paragraph 5.3.10, 5.3.11 Threshold Light or End Light Approach – paragraph 5.3.4.1A & B, 5.3.4.8 Simple Approach Lighting System.

**Easy Installation:**

Limited crew. No trenching. No airfield interruptions. Just place the JCL60F and it emits light dusk-to-dawn while maintaining its battery.

**Low Maintenance:**

The JCL60F integrates solar panels, battery, electronics and LED light source into a compact, stand-alone unit requiring minimal maintenance for 5 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.

**Application:**

- Touchdowns and lift-off area (TLOF)
- Final approach and take-off area (FATO)
- Taxiway lighting
- NVG operations, covert-only mode
- Emergency or temporary lighting



## RM01 Hand held Radio Controller

### Description:

The RM01 is a rugged remote radio controller designed to remotely activate airfields. Users can roam around the airfield for easy activation, inspection, and testing of airfield lights.

2.4GHz worldwide accepted radio control The 2.4GHz wireless network platform is designed to allow the operator to control a wide range of Lansing products on the airfield, including taxiways, runways, barricades, obstruction sign lighting and area lighting. The standard radio controller broadcasts a command message to all lights within range. This range is approximately 1.4 km, or 0.86 miles. If a higher gain antenna is used, the range can be extended.

Allocate lights into 'light groups' and remotely control each group Lights can be allocated to up to 15 'groups', such as taxiways, runway edge or threshold. Each group can be controlled independently.

### Features

- Set units to synchronised flashing
- Allocate lights into 'light groups' and remotely control each group
- Uninterrupted, secure, MIL-grade encryption
- Shut down or turn all lights 'ON' remotely within seconds
- Change light intensity remotely
- Memory function

### IP68 Protection:

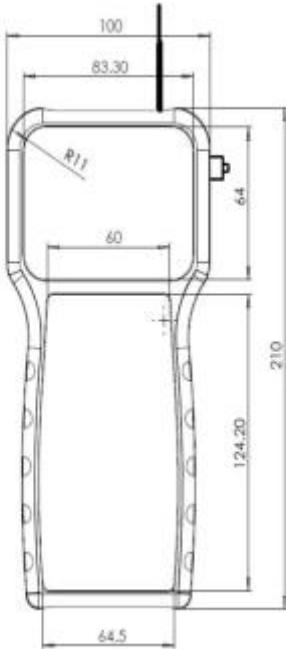
Protected from harsh environments The Lansing Radio Controller ships in an IP68 Pelican case which protects it from harsh environments, and comes with an IP68 rated charging plug, omnidirectional antenna, and ON/OFF switch and cover. The Lansing Radio Controller can be rack mounted on a wall/pole mounted, for use with other airfield electronic equipment such as the Pilot Activated Light Control (PALC).

### Multiple Configuration options

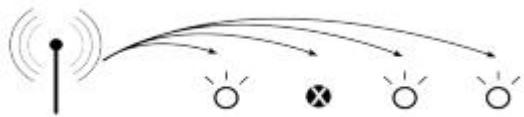
Secure, password-protected communications where one or more controllers can be keyed to a system of lights.

### Visual display interface

The interface of 2.4 inch TFT LCD color display can display switch status, alarm status, battery voltage. Visual display of manual/automatic; Visual display of keyboard lock status;



#### Wireless Control Works



Point-to-multipurpose wireless system communicates with each light individually so that if one light goes out, the system still functions.

SPECIFICATIONS	
Control Range	Up to 4 km
Individual Groups	3 more groups can be Customize
Frequency	900 MHz point-to-multipurpose; others available, please inquire
Encryption	Up to 256 bit AES encryption
	yes
Charging interface	12VDC input
Auto/Manual	Can be changed by Hand held
Operation	Fixed intensity and flicker frequency can be set or also can change intensity. 1000 hrs of storage on a single charge
Modes	Visible, flashing, steady on, off, autonomous, temporary, emergency, diagnose
Antenna	Removable antenna included External antenna options
Battery	Lithium-ion, long cycle life 5V, 13 Ahr Universal battery charger included
Construction	UV anti PC Back lit, waterproof, silicone keypad
Operating Temperature	-40 to 60 °C
Weight	Weight



**Operation and set up:**

Designed to be almost maintenance-free, the JCL60F requires minimal attention, though the following maintenance and servicing information is provided to help ensure the life of your Lansing product.

1.Cleaning Solar Panels - occasional cleaning of the solar panels may be required. Using a cloth and warm soapy water, wipe off any foreign matter before rinsing the panels with fresh water.

2.Battery Check - inspection of batteries should be performed every three years (minimum) to ensure that the charger, battery and ancillary electronics are functioning correctly. Using a voltage meter, check that the battery voltage is at least 12 volts under 100mA load, and ensure all terminals are clear of foreign matter.

3.O-Ring Check - inspect the condition of the O-ring for damage, wear or if it is brittle, and replace if necessary. The O-ring should be a rubber texture to ensure a complete and even seal.

**JCL60F Long Term Battery Storage & Maintenance**

If the JCL60F is to be placed in storage for an extended period please follow the below information. The batteries inside the lights must always be stored in a fully charged state.

Always make sure the ON/OFF switch is in the OFF position.

All batteries will discharge over time and the rate of discharge is dependent on temperature. If the light is being stored in temperatures greater than 40°C the battery will discharge faster.

The JCL60F is fitted with a charge port that can be used to charge the battery and test the battery voltage. Please check the battery regularly and recharge if necessary. Charge the battery via the external charging port on the base of the unit. Only attach the plug with your hand, do not use multi-grips to attach the plug.

Turn the ON/OFF switch to the ON position and place unit in the sun for 2-4 days.

**NOTICE:**

Care must be taken to observe the polarity of each wire before they are connected. To ensure waterproofing of the unit, make sure that there is a satisfactory seal.

**Installing the Light Head Assembly on the Solar Unit**

After servicing, it will be necessary to reinstall the light head on the solar unit.

1.Connect the 4 bullet connectors

2.Ensure the O-ring seal on the top of the solar chassis is in place, clean and lightly greased

3. Feed the wires into the corner of the solar unit

4. Locate the light head onto the solar unit in the correct orientation to the runway. The light head is fitted with reflective tape indicators to show light output. This colour indication should be aligned with the colour indication on the solar unit to ensure correct alignment.

5. Fit the 4 x M6 x 20 SHCS

6. Tighten the SHCS evenly and firmly.

- It is recommended that the bolts for holding the light heads to the Solar Base units have a torque setting applied of 3Nm for a satisfactory seal. Applying a higher Torque setting is not recommended and may void warranty. If in doubt, please contact LANSING.

7. Remove all tools, nuts and bolts from the runway.

### **Replacing the Battery**

The JCL60F has an internal battery compartment, which provides the user with the ability to change the battery after years of operation.

1. Turn the unit on its side

2. Remove the four M6 x 25mm screws from the body/base section.

3. Place the unit back upright while still holding onto the base

4. Slide the chassis upwards just enough to expose the battery wiring loom terminals

5. Disconnect the battery wiring loom terminals

6. Slide the chassis further upwards until it has been removed completely

7. Remove the old battery and discard in a safe manner.

8. Place new battery onto base

9. Slide the chassis back over the new battery just enough so that the wiring loom terminals can be reached.

10. Connect the battery wiring loom terminals, ensuring that the polarity of each wire is correct beforehand.

11. Slide the chassis completely onto the base, ensuring that the chassis sits on the rubber gasket of the base properly and that it is not contaminated.

12. Hold the chassis and base together and place the unit onto its side.

13. Replace and fasten the four M6x25mm screws to a torque setting of 1.8 - 2 Nm. Applying a higher torque setting is not recommended and may void warranty. If in doubt, please contact LANSING.

14. Place the unit back upright.

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15. To test place dark cover (towel or jacket) on top of light to activate sensor, light will come on.

### **Safe Battery Handling**

#### **Charging and Discharging**

- Always ensure batteries are fully charged when installing new lights. The light will be dispatched from the LANSING factory 30--40% charged. However if time has elapsed between dispatch and installation, battery voltage must be checked.
- Never short-circuit or reverse polarity of a battery, damage to the battery and device may occur, and there is a risk of fire.
- Do not use different types of batteries in the same battery assembly. Sealed lithium battery and NiMH do not mix.
- If the battery has been deep-discharged, a prolonged charging time is required to bring the battery back to full capacity.

### **Handling**

- Do not incinerate or dismantle batteries. Cell components are corrosive and may be harmful to skin and eyes.
- Do not pull on battery lead wires or connector. Excessive force on the leads or connectors can damage the welding joints or other connections.
- Batteries are recyclable. Please dispose of properly.

### **Storage**

- Always store batteries in a cool, dry place.
- After long storage, it is desirable to cycle (charge/discharge) the battery 3 times to restore full capacity.
- Do not mix batteries with metal objects during storage or transportation to avoid accidental short-circuit.
- Do not store large quantities of batteries in a densely packed condition when they are in a charged or partially charged state.