TECHGUARD

Solar Light Pro

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Solar Light Pro User Manual

Product: Solar Light Pro
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Category: Solar Security Light
Power: Integrated solar panel + LiFePO4 battery
Weatherproofing: IP65

What this light does

The TechGuard Solar Light Pro is an all-in-one solar perimeter light built for compound walls, driveways, estate streets, warehouse yards, and commercial sites. The solar panel, LiFePO4 battery, PIR motion sensor, and LED array are housed in a single IP65 weatherproof unit with zero mains wiring or electricity running cost after installation.

Key capabilities:

- Dusk-to-dawn automatic operation: Turns on automatically at dusk and shuts off at dawn to recharge.
- PIR motion-sensing boost: Increases LED output when movement is detected in the sensor zone, then dims back to conserve battery when the area is clear.
- Multi-night backup: Built-in LiFePO4 battery provides up to 3 nights of backup operation during cloudy weather.
- Flexible mounting: Supports both pole-mount and wall-mount installations.

App status note: Remote on/off switching and brightness control in the TechGuard mobile app (TuyaLightDetail) are currently marked Coming soon. Until app control is enabled, the unit operates autonomously on its built-in dusk-to-dawn and PIR motion schedule.

What you need

- A sunlit mounting location on a perimeter wall or pole (avoid shade from roofs, trees, or overhangs)
- Included mounting bracket, bolts, and pole clamp hardware
- Basic installation tools (drill, masonry anchors or spanner, and ladder as required for mounting height)

Installation and setup

1. Choose the mounting position: Select a wall or pole with direct, unobstructed sunlight for most of the

day. Mount at a height that covers your driveway, gate, or perimeter path while keeping the PIR sensor facing the approach area.
2. Pre-charge before first use: If the battery shipped partially discharged, leave the unit in direct sunlight for 1 full day before relying on overnight operation.
3. Power on the unit: Press the physical power switch on the light housing (if equipped) to enable automatic dusk-to-dawn and PIR sensing.
4. Secure the bracket: Fasten the mounting arm firmly to the wall or pole, then angle the solar panel toward the sun and the LED face toward the area to illuminate.
5. Test operation: Cover the solar panel completely or wait until dusk to confirm the light turns on and responds to motion in front of the PIR sensor.

Operating behavior

Mode / State	How it works
Daytime charging	LED stays off while the solar panel charges the internal LiFePO4 battery.
Dusk-to-dawn	Automatically illuminates at dusk without manual switching.
Motion boost	PIR sensor detects movement and boosts brightness, then returns to standby/dim level after the area clears.
Cloudy weather	LiFePO4 battery reserve supports up to 3 nights of backup operation on a full charge.

Troubleshooting

Symptom	Resolution
Light does not turn on at night	Confirm the unit's physical power switch is on and that nearby streetlamps or floodlights are not shining directly onto the solar panel (which keeps it in daytime mode).
Short runtime overnight	Check that the solar panel is not shaded by trees or eaves, and wipe away dust or debris blocking sunlight.
Motion boost not triggering	Verify the PIR sensor window is clean and unobstructed, and check mounting angle relative to the footpath or driveway.

Everyday care and maintenance

- Wipe the solar panel surface periodically to remove harmattan dust, leaves, or bird droppings so charging efficiency stays high.
- Check mounting bolts and pole clamps after heavy storms to ensure the bracket remains tight.
- Do not open the sealed battery compartment; the unit is IP65 weatherproof and carries a 2-year warranty.