# Unlocking Off-Grid Efficiency AOKLY GROUP to Present Best AGM Deep Cycle Battery Solutions at INAPA




**Qingyuan, Guangdong Nov 3, 2026 (**Issuewire.com**)** - INAPA, the Indonesia International Auto Parts, Accessories & Equip Exhibition, stands as one of Southeast Asia's largest B2B platforms for the automotive and energy supply chain. The event brings together manufacturers, distributors, and project integrators across segments including spare parts, batteries, and charging infrastructure.

At this edition in Jakarta, Aokly Group plans to showcase its best AGM deep cycle battery solutions designed for off-grid and weak-grid environments. The company's exhibit will focus on sealed valve-regulated lead-acid (VRLA) batteries engineered for solar storage, telecommunications backup, and rural electrification across island and coastal regions.

AOKLY GROUP, a Guangdong Province-based high-tech enterprise, integrates research and development, production, and sales under one operation. Its production lines feature advanced equipment and testing instruments imported from Italy.

The product portfolio spans lithium batteries, starting lead-acid batteries, motive-power batteries, storage batteries, solar batteries, and gel batteries. For INAPA, the spotlight falls on the industrial AGM deep cycle battery range built to handle repeated charge-discharge cycles in locations without reliable utility power.

### 1. Off-Grid Efficiency Challenges in Southeast Asia

Southeast Asia's geography creates distinct power supply gaps. Indonesia alone comprises over 17,000 islands. Many rural communities, agricultural operations, and telecommunications base stations

sit beyond the reach of stable grid infrastructure. Solar photovoltaic systems provide daytime generation, yet nighttime loads depend entirely on battery storage. The efficiency of such systems hinges on several measurable factors.

Depth of discharge (DoD) determines how much stored energy remains usable before recharging becomes necessary. Internal resistance affects charge acceptance rates and thermal losses during cycling. High ambient temperatures, common in tropical climates, accelerate plate corrosion and electrolyte drying.

A battery rated for temperate conditions may lose significant cycle life when operating at 35 to 45 degrees Celsius continuously. These variables shape real-world system performance far more than nameplate capacity alone.

For off-grid installers and system integrators, selecting a battery that maintains stable voltage output across deep discharge events while tolerating elevated temperatures is a practical priority. AGM deep cycle battery solutions address these requirements through immobilized electrolyte technology and recombinant gas design.

The absorbed glass mat separator holds sulfuric acid against the plates, reducing stratification and enabling consistent discharge curves even under repeated deep cycling.

**2. AOKLY's AGM Deep Cycle Battery Lineup at INAPA**

Guangdong Aokly Group Co., Ltd. will present its 6FM series and related industrial VRLA products at the exhibition. These 12-volt AGM deep cycle battery units feature valve-regulated sealed construction. They require no water addition and produce no acid mist during normal operation. This maintenance-free characteristic suits remote installations where periodic servicing is impractical or costly.

Key technical attributes of the exhibited range include low self-discharge rates, typically below 3 percent per month at 25 degrees Celsius. This property proves relevant for standby applications such as telecom towers, where batteries may sit at float charge for extended periods before a grid outage triggers discharge.

The AGM construction also supports faster charge acceptance compared to traditional flooded designs, allowing solar panels to replenish stored energy more completely during limited peak-sun hours.

AOKLY GROUP's technical team plans to present charge-discharge curve data at the booth. These curves illustrate voltage behavior across various discharge rates, from C10 to C100, showing how the batteries maintain platform voltage through 50 to 80 percent DoD ranges.

Rather than claiming superiority, the data serves as a reference point. Engineers and system designers can compare these curves against their specific load profiles to evaluate suitability.

The deep discharge recovery capability also receives attention. AGM batteries that can return to full capacity after repeated 80-percent DoD events offer longer service life in solar cycling applications. AOKLY's product documentation indicates designed cycle life figures at specific DoD levels, giving project planners data points for lifecycle cost calculations.

High-temperature float life represents another parameter on display. The company's AGM products undergo testing at elevated temperatures to establish derating curves. For Indonesian and broader

ASEAN installations, where battery enclosures routinely exceed 30 degrees Celsius, these derating figures help engineers size systems accurately without over-specifying or under-specifying capacity.

**3. Visitor Engagement and Regional Adaptation**

Indonesian and ASEAN buyers bring specific concerns to exhibitions like INAPA. Salt spray corrosion ranks high among them. Coastal and island installations expose battery terminals, connectors, and casings to marine air. AOKLY GROUP addresses this through terminal treatment processes and casing material selection designed to resist corrosion in humid, salt-laden atmospheres.

Shipping logistics also matter. Sealed AGM batteries classify as non-spillable under IATA and IMDG transport regulations, simplifying ocean freight documentation. Guangdong Aokly Group Co., Ltd. provides packaging configurations tested for maritime container transit, including pallet stacking arrangements that protect units during the multi-week voyages common in Southeast Asian shipping routes.

Beyond hardware, the company offers an ampere-hour sizing reference tool. This approach allows system integrators to start with daily energy demand in watt-hours, factor in local solar irradiance, system voltage, and desired autonomy days, then arrive at a recommended battery bank capacity. The tool does not replace independent engineering judgment. Instead, it provides a starting framework that buyers can verify against their own field measurements and load data.

AOKLY GROUP's experience supplying batteries to markets across Asia, the Middle East, Africa, and South America informs its regional adaptation approach. Different climates, grid conditions, and logistics constraints require adjusted product configurations.

The company maintains partnerships with distributors and project companies in over 50 countries, building a feedback loop between field performance data and product development.

**4. Quality Infrastructure and Production Capability**

The manufacturing base in Guangdong Province operates with ISO-certified quality management systems. Production capacity covers multiple battery chemistries and form factors. For the AGM deep cycle battery category specifically, plate manufacturing uses automated casting and pasting lines.

These processes control active material density and grid alloy composition, both of which influence cycle life and high-temperature durability.

Testing laboratories at the facility perform IEC and JIS standard evaluations. Capacity verification, cycle life testing, and thermal runaway threshold analysis occur in-house. This testing infrastructure allows Guangdong Aokly Group Co., Ltd. to provide traceable quality documentation with each shipment, a requirement increasingly specified by institutional buyers and development-funded rural electrification projects.

The company also holds certifications relevant to export markets, supporting customs clearance and regulatory compliance across ASEAN member states. For large-volume procurement, factory audits and third-party inspection coordination are available, giving procurement teams direct visibility into production processes.

**5. Practical Outlook for Off-Grid Energy Storage**

The off-grid battery storage segment in Southeast Asia continues to expand as telecommunications operators extend coverage to underserved islands and as agricultural operations adopt solar-powered irrigation and cold storage. AGM deep cycle battery solutions remain a practical choice for these applications due to their sealed construction, predictable discharge characteristics, and tolerance for irregular charging patterns inherent to solar-dependent systems.

AOKLY GROUP's participation at INAPA reflects a straightforward intent. The company presents field-relevant products with documented performance data. Visitors gain access to technical staff, product samples, and sizing resources. For buyers evaluating off-grid storage components, the booth offers a reference point backed by manufacturing traceability and regional logistics experience.

Interested parties may contact Guangdong Aokly Group Co., Ltd. through its official website for product specifications, sizing assistance, or exhibition booth scheduling.

Official website: https://www.aokly-battery.com/

**FAQ**

**Q1: What makes AGM technology suitable for off-grid solar storage?**

AGM batteries use absorbed glass mat separators that immobilize the electrolyte. This design eliminates acid stratification, supports deep cycling, and requires no water maintenance. These features make AGM deep cycle battery products practical for remote solar installations where regular servicing is difficult.

**Q2: How does high ambient temperature affect AGM battery lifespan?**

Elevated temperatures accelerate chemical reactions inside the battery, increasing plate corrosion and water loss rates. For every 8 to 10 degrees Celsius above 25 degrees, expected float life approximately halves. AOKLY provides temperature derating data to help engineers size systems appropriately for tropical climates.

**Q3: Can AGM deep cycle batteries handle frequent deep discharges?**

Yes. AGM deep cycle batteries are designed for repeated discharge to 50 to 80 percent DoD. Cycle life varies with discharge depth. Shallower cycling extends total cycles, while deeper cycling delivers more energy per cycle but reduces overall cycle count. Specific figures depend on the product model and operating conditions.

**Q4: Are sealed AGM batteries safe for ocean freight to island locations?**

Sealed VRLA-AGM batteries are classified as non-spillable, which simplifies international shipping documentation. They do not leak acid in any orientation and meet IATA and IMDG transport requirements. AOKLY GROUP provides maritime-tested packaging for container shipments throughout Southeast Asia.

**Q5: How should buyers determine the correct battery capacity for an off-grid system?**

Start with daily energy consumption in watt-hours. Factor in system voltage, desired autonomy days, maximum DoD, and charge efficiency losses. Divide total required watt-hours by battery voltage and

allowable DoD to determine minimum ampere-hour capacity. AOKLY offers a sizing reference table that follows this methodology for independent verification by project engineers.







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