

# VANGUARD®

## 3.8kWh Lithium-Ion Battery Packs

Designed to integrate seamlessly. Designed to perform.

### Increased Uptime

- > Up to 2000 cycle life

### Durability

- > Aluminum Diecast enclosure for ultimate protection from wear and tear

### Operational Confidence

- > Integrated Battery Management System

### Easy Integration

- > Dual CANbus communication protocol allows OEMs to communicate with the battery's J1939 (automotive standard) CANbus

### Easy Troubleshoot

- > CANbus diagnostics opportunities

### Industry-Leading Warranty\*

- > Robust three year commercial limited warranty

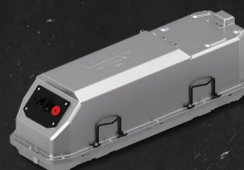


Now Powering Club Car® Tempo  
Lithium-Ion Golf Cars

See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.



# BATTERY TECHNICAL SPECIFICATIONS



|   |                                     |
|---|-------------------------------------|
| <b>CONFIGURATION</b>                                    | Lithium-Ion, 14S                    |
| <b>NOMINAL VOLTAGE (V)</b>                              | 51.6                                |
| <b>TOP VOLTAGE (V) PER IEC 61960</b>                    | 58.8                                |
| <b>TOP VOLTAGE (V) FOR EV-APPLICATIONS</b>              | 58.1                                |
| <b>CUTOFF VOLTAGE (V)</b>                               | 35.0                                |
| <b>NOMINAL CAPACITY PER IEC 61960</b>                   | 73.8 Ah / 3.80 kWh                  |
| <b>COMMUNICATION PROTOCOLS</b>                          | J1939 (29-bit), CAN Open (11-bit)   |
| <b>DISCHARGE TEMPERATURE RANGE</b>                      | -30°C to +70°C                      |
| <b>STORAGE TEMPERATURE RANGE<br/>(1 MONTH / 1 YEAR)</b> | -20° to +60°C / -20°C to +25°C      |
| <b>CHARGING TEMPERATURE RANGE</b>                       | 0°C to +50°C                        |
| <b>MARKETED DURABILITY HOURS/CYCLES</b>                 | 2000 cycles to 80% initial capacity |
| <b>RATED CHARGING CURRENT (A)</b>                       | 37.5                                |
| <b>RATE DISCHARGING CURRENT (A)</b>                     | 75                                  |
| <b>PARALLEL CAPABLE</b>                                 | (2021 release)                      |
| <b>STANDARD CHARGE TIME</b>                             | < 4.5 Hours                         |
| <b>VANGUARD CHARGER OUTPUT POWER (W)</b>                | 1050 W                              |
| <b>ON-BOARD OR STAND ALONE</b>                          | Either                              |

# VANGUARD

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**[WWW.VANGUARDPOWER.COM](http://WWW.VANGUARDPOWER.COM)**

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