

## Nickel Metal Hydride

Cornerstone's associated factories manufacture custom nickel metal hydride battery packs and assemblies. Nickel metal hydride (NiMH) cells have steadily increased in popularity since the late 1980s. Continual increases in performance have made this chemistry an excellent choice for small, lightweight, portable, and handheld applications.

Our associated manufacturer's battery design teams use state of the art mechanical and electronic design tools to optimize the safety, reliability, and manufacturability of your custom battery packs. This helps us deliver the most cost-effective and dependable nickel metal hydride battery pack solution for your needs.

Cornerstone's nickel metal hydride battery packs offer numerous advantages over batteries of other chemistries. They provide 30-40% more capacity than same-sized NiCd cells, are less prone to "memory effect" than NiCd, present no recycling issues, and are competitively priced—especially compared to lithium-ion batteries.

Like nickel cadmium cells, nickel metal hydrides prefer a constant current charge. Standard charge is C/10 for 14 hours, but NiMH batteries can take a charge in as little as one hour with  $dT/dt$  (delta temperature/delta time) or peak voltage detect termination.

Applications for nickel metal hydride batteries include: cameras, cell phones and mobile telecom devices, notebook PCs, portable DVD players and TVs, portable stereos and CD players, cordless vacuum cleaners, and any other application where high energy and small size are critical.

- Cell voltage: 1.2V (nominal)
- Energy by weight: 60-80 watt hour/kilogram
- Cycle life: up to 500+ cycles

- Self-discharge rate: 30% per month
- Operational temperature range: -20°C to 60°C
- Sizes: various button and round cells