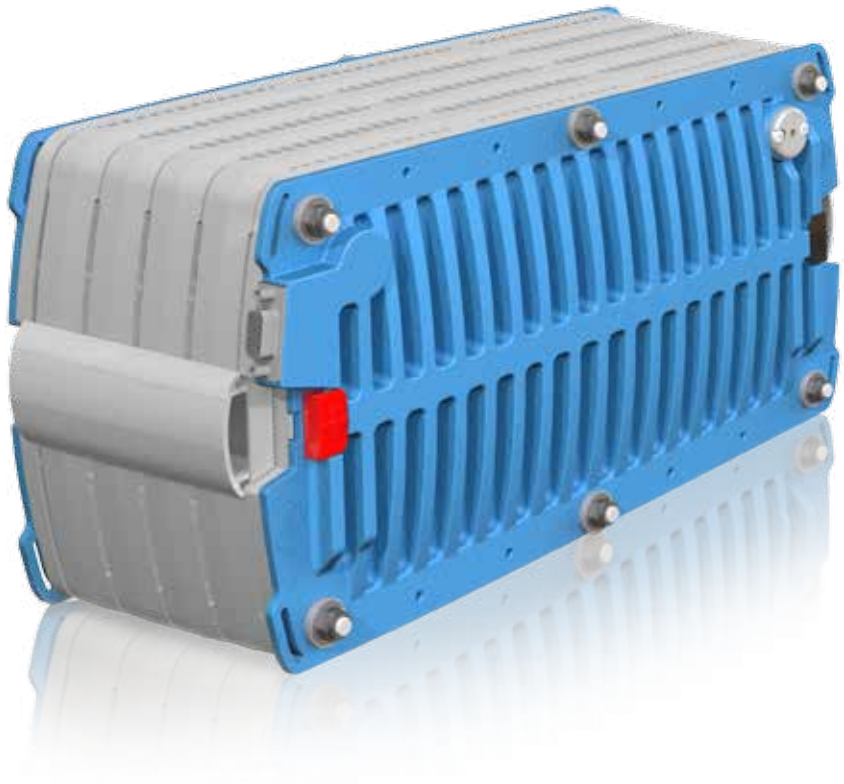
Product information

Nilar 12V Energy Module



ADVANTAGES

- Maintenance Free Operation
- High Power-to-energy Ratio
- Modular Design
- Fast Charging
- Highly Recyclable
- Long Cycle Life
- Low Internal Resistance

The bipolar battery has been long thought of as the holy grail of battery construction technology. However, with most battery chemistry types there are issues that prevent this technology from becoming commercially available. Since 2001, Nilar has been working to develop a bipolar NiMH (nickel metal hydride) solution and is today manufacturing the only commercially available bipolar NiMH battery.

Nilar's strategy is to deliver a powerful battery pack, based on our unique simplification of the battery production process. The Nilar bipolar NiMH battery is the ideal solution for those markets where cost efficiency, low resistance, volume, weight, safe and reliable technology, cycle life and recharging time are key considerations.

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Specifications

Electrical Characteristics	12 V Module	Unit
Nominal Voltage	12	V
Rated Capacity (@ C/5)	10	Ah
Energy	126	Wh
Gravimetric Energy Density	53	Wh/kg
Volumetric Energy Density	114	Wh/dm^3
Peak Power	831	W
Gravimetric Power Density	349	W/kg
Volumetric Power Density	754	W/dm^3
Max. Continous Discharge Current	30	A
Mechanical Characteristics		
Dimensions	318 x 165 x 21	mm
Weight	2.38	kg
Volume	1.10	dm^3
Operating Conditions		
Charge	-20 to +40	°C
Discharge	-20 to +50	°C
Storage Conditions		
Transportation	-25 to +50	°C
Storage	-25 to +40	°C

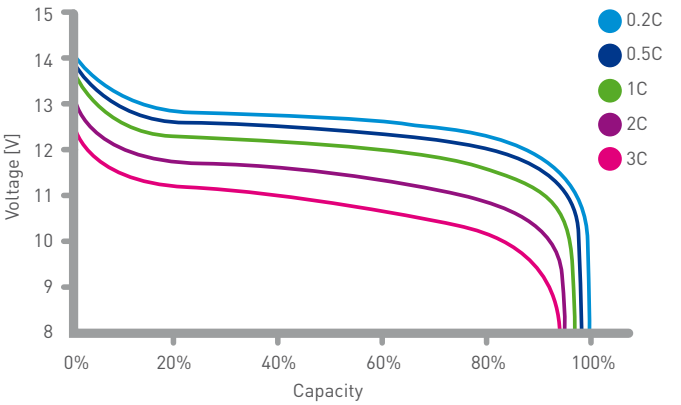

Figure 1.
Typical voltage profiles for constant current discharges with various discharge rates. Charging and discharging made at +20°C.

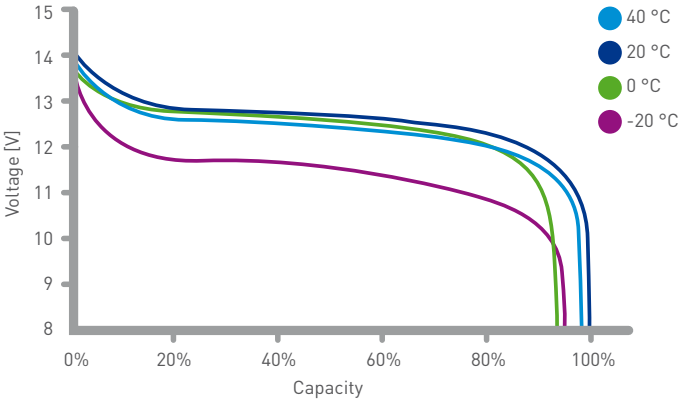

Figure 2.
Constant current discharge with 0.2C at various temperatures. The battery was fully charged at +20°C, acclimatized for 12 h at test temperature and then discharged.