

Wireless Beacon

Application Note



Energy for wireless beacons

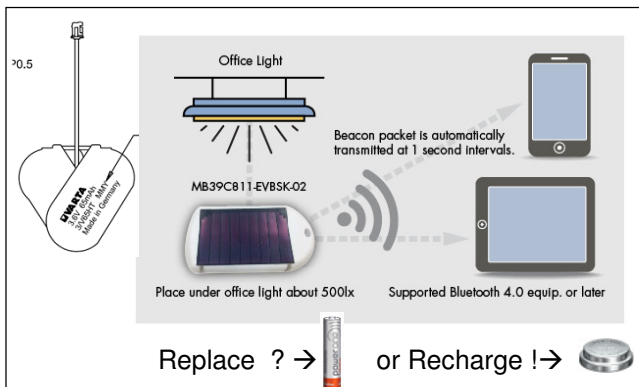
Beacons are small transmitters, that transfer information based on Bluetooth Low Energy (BLE) to portable mobile devices. Thus they can individually communicate with customers that are close to their facilities or inside their shops. The solution can be used both inside the shop or outside along the street.

Battery challenge

In case the beacon is not **continuously connected to main power** or powered by **energy harvesters from solar cells or thermoenergy**, there is a need for **reliable and environmentally independent energy storage** device. Charging and discharging at **extreme temperatures and humidity** conditions are needed, while voltage and supply currents must be individually adaptable.

Technical solution

Varta Microbattery offers airtight sealed rechargeable **Ni-MH button cells** that are specially dedicated to be used in a temperature range from **-20°C to + 85°C** out of the **Robust85 family**.



Characteristics	Battery 3/V65HT
Voltage	3.6 V
Capacity	65 mAh
Peak current	130 mA
Discharge temperature	-20°C to +85°C
Size	33 mm x 33 mm x 8 mm
Weight	9 g

Beacon Battery

VARTA Microbattery's Ni-MH High Temperature batteries (Robust85 family) offer rechargeable battery solutions with reliable power for supplying **independent electronic beacons**. Recommended configurations: 2/V65HT, 3/V65HT or other versions where size and voltage can be adjusted to customer's needs.

- wide temperature range -20 to +85°C
- long lifetime – up to 5 years @ 45°C
- high reliability – by fully automated cell production in Germany
- high overcharge stability (Robust85 family)
- design flexibility on voltage level from 1.2V to > 4.8V.
- design flexibility on battery shape side-by-side or stacked
- simple charging system continuous charging possible
- UL recognized cell, ROHS compatible
- Halogen and Perchlorate free
- environmentally friendly Ni-MH technology