

Design study

# Medical smart patch



### Next generation smart patch

Beside the actual vital parameters, the next generations of smart patches will also measure complex values, which in addition to dementia also include pain, dizziness, incontinence and exhaustion. The main target of the treatment is increasingly aimed at measuring as contactless as possible in order to increase the patient's well-being.

### Battery challenge

Highest energy density, robustness and maximum housing thickness of 4 mm of the battery cell is decisive to user acceptance design shape and therefore gets highest design attention.

### Technical solution

The round flat form factor, the robust stainless steel housing and high energy density of the CoinPower A4 generation fits perfectly in to the dedicated shape of your medical assistant. With its patented cells design, VARTA CoinPower offers the perfect energy density with highest safety. Low weight and a broad range of cell sizes allow flexible design shaping and keeps the patches thin – perfect for comfortable user experience. For example look at our CP1240 A4 cell



CHARACTERISTICS	COINPOWER CP1240 A4
Typical Capacity	55 mAh @ 3.7 V
Dimensions	12.1 mm diameter 4.0 mm height
Discharge current	106 mA continuous 156 mA for 2 sec pulsed
Cycle Performance	>500 Cycles (>80 % of initial Capacity)
Safety Features	Robust Stainless-Steel Housing with build-in PRV

### Lithium Coin Cell – CoinPower

The CoinPower series with cells from 29 to 155 mAh offer the highest energy density with an outstanding cycle life performance for wearable medical and healthcare solutions. Outstanding safety features will make this battery the perfect rechargeable battery solution. The CoinPower is exclusively produced on fully automated production lines in Germany to ensure a maximum production accuracy on every single cell.

- Highest safety feature on the market
- Discharge current up to 3C
- Best-in-class Cycle Life Performance
- Design flexibility by using tags, wires or just the bare cell with cell holder
- UL, IEC and UN IATA recognized cell
- Reliability – Made in Germany