

Wearable Fitness Sensor

Application Note



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The “cosinuss°One” is an in-ear fitness sensor for professional use in order to improve training method for all kind of athletes. This device can measure the pulse and body temperature with the highest precision. All measured data can be transferred to a smartphone or watch and can be evaluated after training or competition.

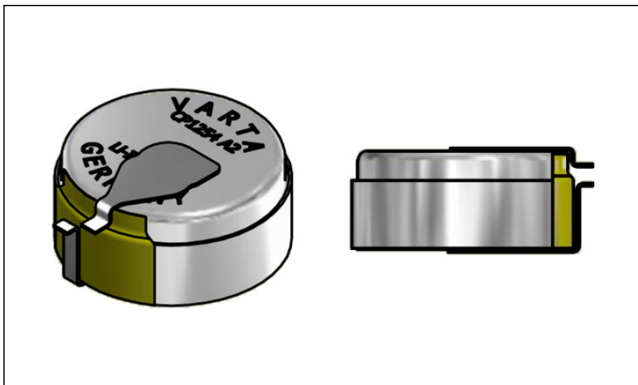
The “cosinuss°One” is more than just an alternative to an ordinary chest strap device.

Battery challenge

Since this device is determined for professional fitness use, high robustness and reliability of the cell itself must be given. The endurance cycle life performance will meet the customers requirement of a high performance device for every day.

Technical solution

The round flat form factor of the CoinPower CP1254 fits perfectly in to the dedicated shape of the whole device. The cell has two very flat tags (0.2mm) on both faces in order to keep the entire construction very thin. These are connected directly to the electronics of the device. With this concept it was possible to achieve a slim design overall.



Characteristics	CoinPower CP1254 A3
Voltage level	60mAh @ 3.7 V
Dimensions	12.1mm diameter – 5.4mm height
Discharge current	2 C continuous 3 C for 2 sec
Cycle Performance	>500 Cycles (>85% of Cini)
Safety	Robust stainless steel case build-in CID

Lithium Button Cell – CoinPower

The CoinPower series can offer the highest energy density with the perfect form factor for earphone applications. Lightweight and extremely robust this battery is the perfect energy storage solution. User-friendly fast charge capability with the highest safety standard in button cells. CoinPower is exclusively produced on fully automated production lines in Germany to ensure a maximum production accuracy for every single cell.

- Highest energy density in rechargeable coin cells
- Fast-charge capability
- Discharge current up to 3C
- Highest safety feature on the market
- Perfect form factor for earphones designs
- UL, IEC and UN IATA recognized cell
- Reliability – Made in Germany