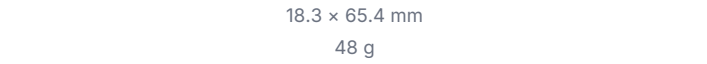

Illustrative render generated from published specifications

18.3 × 65.4 mm
48 g

# Vapcell K28

Vapcell

18650 · NMC

MOOCH-TESTED · 20 A

Live page & updates

| 2,800 mAh | 20 A | 3.6 V | 10.08 Wh |
|---|---|---|---|
| CAPACITY | MOOCH CONTINUOUS | NOMINAL · 2.5 – 4.2 V | ENERGY · 210 WH/KG |

**REFERENCE ONLY — NOT AN OFFICIAL DOCUMENT**

This information is gathered from multiple sources, including manufacturer datasheets, independent third-party testing, and community contributions. Cell specifications vary between production batches and change over time, and no figure here is guaranteed to be correct or current. **Always consult the manufacturer's spec sheet directly.** Use this sheet for reference only — never as the sole basis for a safety-critical decision about charging, discharging, or assembling cells. The cell image is an illustrative render generated from published specifications, not a photograph.

### CAPACITY AMONG 18650S

**#77 of 279**

Lowest in database — Highest

Higher discharge than 77% of 18650 cells in our database. Great for high-drain builds.

### VOLTAGE OPERATING WINDOW

**1.7 V usable**

Cutoff 2.5 V — Nominal 3.6 V — Max 4.2 V

Below nominal the cell sags fast under load; above it, the last of the capacity fills slowly on the constant-voltage taper.

## APPLICATION SUITABILITY

Rule-of-thumb ratings from this cell's capacity and continuous discharge. Check your own load before committing.

| | |
|---|---|
| **Powerwalls** | High capacity means more stored energy per cell. Fewer cells needed for a given kWh target. |
| **Ebike packs** | Good balance of capacity for range and discharge for hills. Works well in most ebike packs. |
| **Car audio** | Enough discharge to handle amplifier bursts without voltage sag. |
| **High-drain vaping** | Usable in regulated mods at moderate wattage. Not recommended for mechanical mods. |
| **Flashlights** | Decent runtime. Works well for most flashlights. |
| **Power tools** | Sufficient discharge and capacity for most power tool packs. |

## IDENTITY

| | |
|---|---|
| Manufacturer | **Vapcell** |
| Model | **K28** |
| Format | **18650** |
| Chemistry | **NMC** |
| Wrap colour | **Blue** |
| Terminal | **Flat top** |
| Protection | **Unprotected** |

## OPERATING TEMPERATURE

| | |
|---|---|
| Charging | **0°C to 45°C** |
| Discharging | **-20°C to 60°C** |

## ENERGY & POWER DENSITY

| | |
|---|---|
| Energy | **10.08 Wh** |
| Specific energy | **210 Wh/kg** |
| Volumetric density | **585.99 Wh/L** |
| Power density (mass) | **1,500 W/kg** |
| Power density (volume) | **4,186 W/L** |
| Capacity ranking | **#77 of 279 18650s** |

## PHYSICAL

| | |
|---|---|
| Diameter | **18.3 mm** |
| Length | **65.4 mm** |
| Weight | **48 g** |

## ELECTRICAL

| | |
|---|---|
| Rated capacity | **2,800 mAh** |
| Nominal voltage | **3.6 V** |
| Max charge voltage | **4.2 V** |
| Discharge cutoff | **2.5 V** |
| Energy | **10.08 Wh** |
| Internal resistance | **12 mΩ** |
| Max continuous discharge | **20 A (mooch)** |
| Discharge C-rate | **7.1C** |
| Standard charge current | **1,500 mA** |
| Typical charge time | **1.9 h** |

## C-RATE CONVERSION · 2,800 MAH

| C-RATE | CURRENT | THEORETICAL RUNTIME |
|---|---|---|
| **0.2C** | 0.56 A | 5h 00m |
| **0.5C** | 1.4 A | 2h 00m |
| **1C** | 2.8 A | 1h 00m |
| **2C** | 5.6 A | 30m |
| **3C** | 8.4 A | 20m |
| **5C** | 14 A | 12m |

Highlighted row is closest to the rated 20 A continuous discharge.

## CHARGING

| RATE | CURRENT | ESTIMATED TIME TO FULL |
|---|---|---|
| **0.5C** | 1,400 mA | ~2h 00m |
| **Standard** | 1,500 mA | ~1h 52m |
| **1C** | 2,800 mA | ~1h 00m |

Constant-current phase only. Real charge time runs longer because of the constant-voltage taper at the end.

## SERIES PACK CONFIGURATIONS

Voltages calculated from this cell's own nominal and maximum charge voltage. The 3P columns show one common parallel count as a worked example — scale the parallel group to the capacity you need.

| SERIES | NOMINAL | FULLY CHARGED | CELLS AT 3P | CAPACITY | ENERGY |
|---|---|---|---|---|---|
| **3S** | 10.8 V | 12.6 V | 9 | 8.4 Ah | 91 Wh |
| **7S** | 25.2 V | 29.4 V | 21 | 8.4 Ah | 212 Wh |
| **10S** | 36 V | 42 V | 30 | 8.4 Ah | 302 Wh |
| **13S** | 46.8 V | 54.6 V | 39 | 8.4 Ah | 393 Wh |
| **14S** | 50.4 V | 58.8 V | 42 | 8.4 Ah | 423 Wh |

## EXAMPLE PACKS

### 7S2P
24V ebike / small pack

14 cells · 25.2 V

5,600 mAh · 141 Wh

40 A max · ≈0.67 kg cells

### 13S4P
48V ebike standard

52 cells · 46.8 V

11,200 mAh · 524 Wh

80 A max · ≈2.5 kg cells

### 16S4P
DIY powerwall

64 cells · 57.6 V

11,200 mAh · 645 Wh

80 A max · ≈3.07 kg cells

### 4S6P
Power tool replacement

24 cells · 14.4 V

16,800 mAh · 242 Wh

120 A max · ≈1.15 kg cells

## SIMILAR CELLS

Same format and chemistry, within ±500 mAh.

| CELL | MAH | CONTINUOUS | WH | WEIGHT | WH/KG |
|---|---|---|---|---|---|
| **Vapcell K28 (this cell)** | **2,800** | **20 A** | **10.08** | **48 g** | **210** |
| LG LGABE11865 | 3,200 | 9 A | 12 | 49 g | 245 |
| LG LGEBE11865 | 3,200 | 4.9 A | 12 | 49 g | 245 |
| Samsung ICR18650-32A | 3,200 | 6.4 A | 12 | 50 g | 240 |
| Sanyo NCR18650GA | 3,300 | 10 A | 11.9 | 48 g | 248 |
| EVE EVE-INR18650/33V | 3,200 | 10 A | 11.5 | 48 g | 240 |

## HANDLING & SAFETY

- Never charge above 4.2V or discharge below 2.5V.
- Store cells at around 3.6-3.8V (roughly 40-60% charge) for long-term storage.
- Don't mix cells with different capacities, chemistries, or states of charge in a pack.
- Inspect wraps before use. A torn wrap can cause a short circuit.
- Always use a BMS or balance charger appropriate for your pack configuration.
- Keep cells away from metal objects, keys, and coins. A short across the terminals can cause fire.

## SOURCES & FURTHER READING

| | |
|---|---|
| Cell Saviors page | cellsaviors.com/cell-database/vapcell-k28 |
| Manufacturer datasheet | https://www.vapcelltech.com/h-pd-77.html |
| Independent test (Mooch) | https://www.e-cigarette-forum.com/threads/bench-test-results-v... |
| Full cell database | cellsaviors.com/cell-database |