Illustrative render generated from published specifications

18.25 × 65.05 mm
46.5 g

# Epoch 30P

Epoch · released 2021

18650 | NMC | MOOCH-TESTED · 15 A

Live page & updates

| 3,000 mAh | 15 A | 3.6 V | 10.8 Wh |
|---|---|---|---|
| CAPACITY | MOOCH CONTINUOUS | NOMINAL · 2.5 – 4.2 V | ENERGY · 232.26 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 — #37 of 279

Lowest in database — Highest

More capacity than 87% of 18650 cells in our database. One of the higher-capacity options.

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** | Might work for smaller setups. Check your amp's peak current draw. |
| **High-drain vaping** | Usable in regulated mods at moderate wattage. Not recommended for mechanical mods. |
| **Flashlights** | High capacity means long runtime. Great for everyday carry and extended use. |
| **Power tools** | Sufficient discharge and capacity for most power tool packs. |

## IDENTITY

| | |
|---|---|
| Manufacturer | **Epoch** |
| Model | **30P** |
| Format | **18650** |
| Chemistry | **NMC** |
| Year released | **2021** |
| Terminal | **Flat top** |
| Protection | **Unprotected** |

## ENERGY & POWER DENSITY

| | |
|---|---|
| Energy | **10.8 Wh** |
| Specific energy | **232.26 Wh/kg** |
| Volumetric density | **634.69 Wh/L** |
| Power density (mass) | **1,161 W/kg** |
| Power density (volume) | **3,173 W/L** |
| Capacity ranking | **#37 of 279 18650s** |

## PHYSICAL

| | |
|---|---|
| Diameter | **18.25 mm** |
| Length | **65.05 mm** |
| Weight | **46.5 g** |

## ELECTRICAL

| | |
|---|---|
| Rated capacity | **3,000 mAh** |
| Nominal voltage | **3.6 V** |
| Max charge voltage | **4.2 V** |
| Discharge cutoff | **2.5 V** |
| Energy | **10.8 Wh** |
| Max continuous discharge | **15 A (mooch)** |
| Discharge C-rate | **5C** |

## C-RATE CONVERSION · 3,000 MAH

| C-RATE | CURRENT | THEORETICAL RUNTIME |
|---|---|---|
| **0.2C** | 0.6 A | 5h 00m |
| **0.5C** | 1.5 A | 2h 00m |
| **1C** | 3 A | 1h 00m |
| **2C** | 6 A | 30m |
| **3C** | 9 A | 20m |
| **5C** | **15 A** | **12m** |

Highlighted row is closest to the rated 15 A continuous discharge.

## CHARGING

| RATE | CURRENT | ESTIMATED TIME TO FULL |
|---|---|---|
| **0.5C** | 1,500 mA | ~2h 00m |
| **1C** | 3,000 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 | 9 Ah | 97 Wh |
| **7S** | 25.2 V | 29.4 V | 21 | 9 Ah | 227 Wh |
| **10S** | 36 V | 42 V | 30 | 9 Ah | 324 Wh |
| **13S** | 46.8 V | 54.6 V | 39 | 9 Ah | 421 Wh |
| **14S** | 50.4 V | 58.8 V | 42 | 9 Ah | 454 Wh |

## EXAMPLE PACKS

### 7S2P
24V ebike / small pack

14 cells · 25.2 V
6,000 mAh · 151 Wh
30 A max · ≈0.65 kg cells

### 13S4P
48V ebike standard

52 cells · 46.8 V
12,000 mAh · 562 Wh
60 A max · ≈2.42 kg cells

### 16S4P
DIY powerwall

64 cells · 57.6 V
12,000 mAh · 691 Wh
60 A max · ≈2.98 kg cells

### 4S6P
Power tool replacement

24 cells · 14.4 V
18,000 mAh · 259 Wh
90 A max · ≈1.12 kg cells

## SIMILAR CELLS

Same format and chemistry, within ±500 mAh.

| CELL | MAH | CONTINUOUS | WH | WEIGHT | WH/KG |
|---|---|---|---|---|---|
| **Epoch 30P (this cell)** | **3,000** | **15 A** | **10.8** | **46.5 g** | **232** |
| LG LGEBMJ11865 | 3,500 | 10 A | 12.7 | 49 g | 260 |
| LG LGDBMJ11865 | 3,500 | 10 A | 12.7 | 49 g | 259 |
| AWT AWT 35A 3500mAh | 3,500 | 35 A | 12.6 | 50 g | 252 |
| Epoch PROTECTED | 3,500 | 8 A | 12.6 | 49.1 g | 257 |
| EVE INR18650-35V | 3,500 | 10 A | 12.6 | 47 g | 268 |

## 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/epoch-30p |
| Manufacturer datasheet | https://cdn.shopify.com/s/files/1/0481/9678/0183/files/EpochBa... |
| Independent test (Mooch) | https://www.e-cigarette-forum.com/threads/bench-test-results-e... |
| Full cell database | cellsaviors.com/cell-database |