



Product Data Sheet

Li-ion Rechargeable Battery ABSLS 8s3p 29.6V 8.4Ah

The 8s3p 8.4Ah battery was originally built for use in the Korean Space Launch Vehicle (KSLV). Since the original design, the battery has also been qualified for use in spacecraft. Due to the size of the battery, it has shown to be popular in the small satellite market.

The original design has a number of variants, some of which have been qualified for manned space flight to be used as part of the Commercial Crew Transportation System. The battery does not require cell balancing electronics.

More than 100 flight batteries have been built and delivered.

Facts at a Glance

| | |
|--------------------|-------------|
| ABSLS™ Cell | 18650M |
| Configuration | 8s3p |
| Nameplate Capacity | 8.4 Ah |
| Energy | 248.6 Wh |
| Mass | 1.66 kg |
| Footprint | 176 x 96 mm |
| Height | 98 mm |
| Nominal Voltage | 29.6V |
| Voltage Range | 24 - 33.6V |

**Celebrating customer success with over 2.5 billion cell hours of in-orbit heritage
using ABSLS Li-ion cell technology**

Qualification and Flight History

Temperature

| Non-Operating | Operating |
|---------------|------------------------|
| -10°C to 55°C | Discharge: 0°C to 45°C |
| | Charge: 0°C to 45°C |

Cell Level Radiation Exposure

| Dosage | Effects |
|--------------|-----------------|
| < 1Mrad | Negligible |
| Up to 18Mrad | ~5% of Capacity |

Shock

| Frequency (Hz) | PF SRS Level Test Q = 10 |
|----------------|-----------------------------|
| 100 | 100g |
| 1,000 | 3,000g |
| 10,000 | 3,000g |

Note: via similarity

Random Vibration

| Frequency (Hz) | Qualification |
|--------------------------|--------------------------|
| 20 | 0.024 g ² /Hz |
| 80 | 0.300 g ² /Hz |
| 250 | 0.300 g ² /Hz |
| 300 | 0.220 g ² /Hz |
| 700 | 0.220 g ² /Hz |
| 2,000 | 0.032 g ² /Hz |
| Overall G _{RMS} | 16.4 G _{RMS} |
| Duration | 1 min/axis |

Notable Missions

| Mission | Customer | Launch Date |
|--|------------------------------|--|
| KSLV-1 Launcher | KARI | August 2009 June 2010 January 2013 |
| CYGNSS | Southwest Research Institute | December 2013 |
| Oculus-ASR | Michigan Tech University | June 2019 |
| CST-100 Starliner (Service Module Battery) | The Boeing Company | December 2019 |

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