

Flexible power options tailored to every inspection need

Standard battery

- Up to 12.5-min max flight time
- Up to 50 charge cycles
- Part of the base package

- ✓ IATA compliant
- ✓ All-payload compatibility

High-capacity battery

- Up to 17-min max flight time
- Up to 100 charge cycles
- Available as an add-on

- ✓ Longer flight time
- ✓ Longer cycle life
- ✓ Reduced cost per flight
- ✓ All-payload compatibility (with conditions)

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02



Elios 3 batteries

Technical specifications



	Standard battery	High-capacity battery
Energy	99.2 Wh	187 Wh
Capacity	4350 mAh	8200 mAh
Battery type	Smart Battery Management System (BMS), Lithium-ion (LiPo)	Smart Battery Management System (BMS), Lithium-ion (LiPo)
Nominal voltage	22.8 V	22.8 V
Weight	620 g, 1.4 lbs	1100 g, 2.43 lbs
Operating temperature	0 - 50 °C, 32 – 122 °F ¹	0 - 50 °C, 32 – 122 °F ¹
Life time (full charge-discharge)	50 cycles	100 cycles
Compatibility	All payloads	All payloads with limitations (notably UT & RAD ²)
Chargers	Standard battery charger Power input: 150 VA	High-capacity battery charger Power input: 250 VA Also compatible with the standard battery charger (150 VA)
Charging time	1 h	1 h 15 with the 250 VA charger 2 h 30 min with the 150 VA charger
IATA DGR compliant	✓	✗ Requires trained personnel to ship according to UN IATA PI-965
Shipping requirements	Carry-on approved	Ground and cargo only

SMART BATTERY MANAGEMENT SYSTEM (BMS)

Elios 3 smart batteries feature built-in electronics that monitor, manage, and report their status, including charge level, health, and temperature.

	Standard battery	High-capacity battery
Smart battery capabilities		
Cycle counter	✓	✓
Battery ID	✓	✓
State-of-health estimation	✓	✓
State-of-charge estimation	✓	✓
Plug-and-play charging	✓	✓
Self-balancing	✓	✓
Storage mode	✓	✓
Travel mode	✓	✓
Deep sleep mode		✓
Safety protections		
Charge protections		
Overcurrent, overvoltage, over/under-temperature	✓	✓
Passive fuse for slow short circuit protection	✓	✓
Discharge protections		
Overcurrent, undervoltage, under temperature		✓
Fast short circuit protections		✓

- Valid for batteries pre-conditioned between 10°C and 40°C (50 °F to 104 °F).
- All Elios 3 payloads are compatible with the high-capacity battery, though users should consult the Elios 3 system-level performance listed below for how payload and environmental factors may affect flight performance and control.

Elios 3 batteries

Technical specifications



ELIOS 3 SYSTEM-LEVEL PERFORMANCE

Flight performance and control of the Elios 3 can be affected by payload configuration and environmental conditions. The system-level performance specifications define safe operating ranges to support safe and effective use. Deviating from these conditions may impact performance and requires appropriate risk management and operator experience.



IMPORTANT NOTICE

Each of the operating conditions are interdependent and combining them alters their maximum specifications. For example: the maximum operating altitude is only valid in 20°C and zero wind conditions. If there is wind and / or the ambient temperature is higher, then the maximum operating altitude will reduce.

	Standard battery	High-capacity battery
Elios 3 without any payload		
Max. flight time ¹	12 min 30 sec	17 min
Max. operating altitude ²	5000 m AMSL	2500 m AMSL
Max. ambient operating temperature ³	50 °C, 122 °F	50 °C, 122 °F
Max. operating wind speed ⁴	7 m/s	5 m/s
Elios 3 with Rev 6 LiDAR		
Max. flight time ¹	9 min 10 sec	13 min 30 sec
Max. operating altitude ²	3000 m AMSL	1500 m AMSL
Max. ambient operating temperature ³	50 °C, 122 °F	50 °C, 122 °F
Max. operating wind speed ⁴	5 m/s	5 m/s
Elios 3 with Rev 7 LiDAR		
Max. flight time ¹	9 min	13 min
Max. operating altitude ²	2850 m AMSL	1400 m AMSL
Max. ambient operating temperature ³	50 °C, 122 °F	50 °C, 122 °F
Max. operating wind speed ⁴	5 m/s	5 m/s
E3 with Rev 6 LiDAR and UT payload		
Max. flight time ¹	7 min 30 sec	11 min 30 sec
Max. operating altitude ²	Under assessment	700 m AMSL
Max. ambient operating temperature ³	50 °C, 122 °F	35 °C, 95 °F
Max. operating wind speed ⁴	5 m/s	3 m/s
E3 with Rev 7 LiDAR and UT payload		
Max. flight time ¹	7 min 20 sec	11 min 10 sec
Max. operating altitude ²	1400 m AMSL	700 m AMSL
Max. ambient operating temperature ³	50 °C, 122 °F	35 °C, 95 °F
Max. operating wind speed ⁴	5 m/s	3 m/s

1. Max flight time in ideal conditions: sea-level, 20°C ambient temperature, new propellers and motors, new fully charged batteries, no wind and hovering.
2. Maximum altitude at an ambient temperature of 20°C and no-wind conditions at which a normal collision resilience and wind resistance can be expected.
3. Maximum ambient temperature at sea-level and no-wind conditions at which a normal collision resilience and wind resistance can be expected.
4. Maximum steady-state wind speed at sea-level and 20°C ambient temperature that the drone can deal with while still having a fair amount of resilience against turbulence, small collisions.
5. Flight time impact varies by battery type and is generally higher with the high-capacity battery than with the standard one.



	Standard battery	High-capacity battery
E3 with Rev 6 LiDAR and RAD payload		
Max. flight time ¹	7 min 50 sec	11 min 40 sec
Max. operating altitude ²	2000 m AMSL	800 m AMSL
Max. ambient operating temperature ³	50 °C, 122 °F	40 °C, 104 °F
Max. operating wind speed ⁴	5 m/s	3 m/s
E3 with Rev 7 LiDAR and RAD payload		
Max. flight time ¹	7 min 30 sec	11 min 20 sec
Max. operating altitude ²	1500 m AMSL	800 m AMSL
Max. ambient operating temperature ³	50 °C, 122 °F	40 °C, 104 °F
Max. operating wind speed ⁴	5 m/s	3 m/s

ADDITIONAL FLIGHT TIME LOSS WITH EXTRA PAYLOADS

Gas sensor	10-20 sec ⁵
RID unit	5-10 sec ⁵
Gas sensor with RID	15-30 sec ⁵



IMPORTANT NOTICE

You MUST update your drone to the latest firmware version before using the high capacity batteries. Failure to update carries inherent safety implications. Flyability will not be responsible for any incidents, damages, and/or injuries resulting from or related to using the High Capacity Battery with a drone operating on outdated firmware. The user is responsible for ensuring the drone's firmware is up to date.



1. Max flight time in ideal conditions: sea-level, 20°C ambient temperature, new propellers and motors, new fully charged batteries, no wind and hovering.
2. Maximum altitude at an ambient temperature of 20°C and no-wind conditions at which a normal collision resilience and wind resistance can be expected.
3. Maximum ambient temperature at sea-level and no-wind conditions at which a normal collision resilience and wind resistance can be expected.
4. Maximum steady-state wind speed at sea-level and 20°C ambient temperature that the drone can deal with while still having a fair amount of resilience against turbulence, small collisions.
5. Flight time impact varies by battery type and is generally higher with the high-capacity battery than with the standard one.