



Intelligent
Energy®



Data sheet

IE-Soar™ 650W

Lightweight fuel cell power module for UAVs and other portable applications

Intelligent Energy is a fuel cell engineering company focused on the development and commercialisation of its PEM fuel cell technologies for a range of markets including automotive, stationary power and UAVs. We are headquartered in the UK, with additional offices and representation in the US, Japan, South Korea and China.

Intelligent Energy provides a unique solution to extend flight times to drones presently constrained by the limitations of batteries.

Flight durations of over three times that provided by batteries have been achieved and fuel cells provide a natural solution for manufacturers moving to larger drones and heavier payloads.

Intelligent Energy's air cooled fuel cell systems run on hydrogen and ambient air to produce clean DC power in a simple, cost-effective, robust and lightweight package. They have a higher energy to mass ratio than battery based systems and can be refuelled in a few minutes.

Please contact us for availability and pricing.

Applications

- Survey and inspection
- Search and rescue
- High quality aerial photography
- Precision agriculture
- Parcel delivery
- Warehouse inventory
- Law enforcement
- Military
- Robotics
- Portable power





IE-Soar™ 650W specifications

Maximum continuous power	650W
Maximum peak power (not to be exceeded)	1000W
Output voltage	19.6V to 25.2V
Fuel Cell Power Module (FCPM)	
Dimensions	196 × 88 × 140mm
Mass	810g
Hydrogen Regulator	
Mass	250g
Maximum regulator (cylinder) pressure	350 bar/5000 psi
Output pressure	0.5 bar ± 0.25 bar/7 psi ± 3 psi
PRV set pressure	2 bar/29 psi
Burst disc set pressure	450 bar/6500 psi
Maximum cylinder mass	10kg
Hybrid battery	
Dimensions	140 × 30 × 20mm
Mass	230g
Capacity	1300mAh
Emergency flight time	2 minutes
Environmental operating conditions	
Operating temperature	5°C to 35°C ¹
Maximum altitude	3000m
Storage temperature	-10°C to +70°C
System lifetime	1000 hours
Safety features	
Automatic failure detection system and backup battery	
Certification of IE-Soar™ 650W	CE and FCC
Other features	
Internal data storage for firmware update, performance and diagnostics	SD card
Communication port; to UAV fuel cell power module or accessories	UART
Output electrical connector	XT-60

¹ It may be possible to widen the operating temperature envelope depending on customer power requirements.

For more information about our products visit our website: www.intelligent-energy.com

To find out how you could benefit from longer flight times, arrange a meeting with a sales representative in your region by emailing: sales@intelligent-energy.com

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