



FCgen®-micro

Ballard's FCgen®- micro is a low-power proton exchange membrane (PEM) fuel cell product, designed for portable and recreational applications. This highly versatile, hydrogen fuelled power product is a derivative of Ballard's fourth generation air cooled fuel cell stack technology.

Alpha prototypes are ready for customer evaluation in applications where product size, durability and power density are key considerations.

Ballard has identified additional technology development areas that can further reduce stack size and improve durability and robustness.

Ballard Power Systems also offers application engineering support to ensure lifetime and performance is maximized through the system development process.

Please contact us at marketing@ballard.com for more information on product availability, engineering support services and pricing.

PRODUCT SPECIFICATIONS

Type:	PEM (Proton Exchange Membrane) fuel cell stack	
Performance*	Rated Power	40 W
	Rated current	3.8 A
	DC voltage	11.2 V†
	Peak Power	50 W
	Peak Current	5.5 A
	DC voltage at peak power	9 V
Durability	Total air-air starts	>400 cycles
	Operating time	>1600 h
Fuel	Hydrogen	>99.9 %
	Fuel supply pressure	0.35 to 0.80 barg
	Fuel flow rate	0.52 slpm†
Oxidant/Coolant	Coolant	Air
	Cooling flow rate, typical	~100 slpm†
	Cooling pressure drop across stack	~15Pa†
Operating Environment	Ambient temperature	-40 to 55 °C
	Start up temperature	≥-10 °C
	Altitude	0 to 3000 mASL
Start Up Time	Start up to 80%	~20 seconds†
Physical Characteristics (18-cell stack)	Length (fuel inlet to outlet)	111 mm
	Width (ox inlet to outlet)	13 mm
	Height (endplate to endplate)	67 mm
	Mass	120 g
	Volume	195 mL

* Performance specifications at lab ambient conditions (22°C, 30% RH, 0 mASL)

† At rated power