

PULSE 15 high-power battery pack

Fast-charge system for all electric and hybrid transport

Transport is going all-electric, pushing the boundaries of battery systems' power.

Based on LTO prismatic cells, Forsee Power teams have specifically developed the new Pulse 15 lithium-ion battery system to provide high power for fast charge.

SYSTEM HIGHLIGHTS

Li-ion battery system with unique power density

- + Power density: 488 W/kg at pack level
- + High-power capability: 9 C peak, 5 C for 5 min
- + Scalable: modular system based on 15 kWh packs connected in parallel
- + Liquid thermal management
- + Best-in-class BMS technology



A complete battery system is made of:

- + Battery packs of 15 kWh each, including Battery Management System (BMS)
- + Master BMS to manage several packs in parallel

BENEFITS

- + Robust and long-life span: up to 15 years
- + Homogeneous performance in all climate conditions
- + Compliant with automotive safety standards
- + Great safety and reliability
- + Optimized weight and volume for high vehicle's capacity

- + Designed to be easily integrated in various vehicles and geometries:



Pulse 15 high-power Li-ion LTO battery system

PHYSICAL SPECIFICATIONS	CONDITIONS	UNIT	# PACKS CONNECTED IN PARALLEL							
			1	5	6	7	8	9	10	15
VOLTAGE										
Minimal	-	V	414							
Nominal	-	V	635							
End of charge	-	V	745							
ENERGY										
Energy	-	kWh	14.6	73	88	102	117	131	146	219
Capacity	-	Ah	23	115	138	161	184	207	230	345
POWER										
Peak power in charge / discharge	pulse 10 s, 4% DOD	kW	127	572	686	800	914	1 029	1 143	1 715
Continuous power in charge / discharge	5 min	kW	76	343	411	480	549	617	686	1 029
Continuous power in charge / discharge	RMS continuous*	kW	51	229	274	320	366	411	457	686
CURRENT										
Peak current in charge / discharge	pulse 10 s, 4% DOD	A	200	900	1 080	1 260	1 440	1 620	1 800	2 700
Continuous current in charge / discharge	5 min	A	120	540	648	756	864	972	1 080	1 620
Continuous current in charge / discharge	RMS continuous*	A	80	360	432	504	576	648	720	1 080
DENSITY										
Specific energy	-	Wh/kg	56							
Energy density	-	Wh/L	58							
Power density	-	W/kg	488							
MECHANICAL CHARACTERISTICS										
Volume	-	Liter	252	-	-	-	-	-	-	-
Weight	-	kg	260	1 300	1 560	1 820	2 080	2 340	2 600	3 900
Height	-	mm	329	-	-	-	-	-	-	-
Width	-	mm	445	-	-	-	-	-	-	-
Depth	-	mm	1 720	-	-	-	-	-	-	-

@ 25°C | DOD: Depth Of Discharge * RMS C-rate: alternating charge and discharge for several hours of operations 24/7

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