





Module	"Extreme" 12P	"Performance" 12P	"Endurance" 12P	"Classic" 12P	Unit	Comment
Reference picture						
Application	Race and performance EV	Best power/range for EV	Maximum range for EV	Best price / range for EV		
Battery chemistry	LiNiCoAlO2 (NCA)	LiNiCoAlO2 (NCA)	LiNiCoAlO2 (NCA)	LiNiCoAlO2 (NCA)		
Cell brand and type	12x Samsung INR18650-25R	12x Samsung INR18650-30Q	12x Samsung INR18650-35E	12x Samsung INR18650-29E		Other cell types on request

Capacity rated	30	36	41.4	34.8	Ah	At 0.2C and ideal situations
Capacity irl	30	35.4	40.2	33.6	Ah	realistic at 1C discharge / 0.5C charge

Size LxWxH	133 x 73 x 41	134 x 73 x 41	135 x 73 x 41	136 x 73 x 41	mm	based on full LxWxH incl. topcap
Weight	650	686	710	686	gram	incl. topcap & bolts excl busbar & bms

Voltage minimal (discharge cut-off)	2.5	2.5	2.5	2.5	V	
Voltage nominal	3.60	3.60	3.60	3.65	V	
Voltage maximum	4.2	4.2	4.2	4.2	V	

Specific energy density	166	186	204	179	Wh / kg	Based on realistic capacity
Specific energy density	271	320	364	308	Wh / l	Based on realistic capacity
Specific power density	1994	1259	791	527	W / kg	Based on peak power
Specific power density	3256	2170	1411	908	W / l	Based on peak power

Max discharge current continuous until empty	240	180	96	33	A	Cell surface stays below 60°C*
Max discharge current 50% duty cycle until empty	300	240	156	99	A	Cell surface stays below 60°C*
Discharge peak current	360	240	156	99	A	< 10 sec, > 1min between peaks

Standard charge	0.5	0.5	0.5	0.5	C	CCCV 4.2V, 0.05C cutoff
Fast charge	1.6	1.3	0.6	1.0	C	CCCV 4.2V, 0.10C cutoff
Standard charging time	150	150	150	150	min	100% capacity
Fast charging time	60	75	125	80	min	100% capacity
Fast charging time	38	45	100	60	min	80% capacity

* Assuming coolant temperature of 25°C
www.powerbattery.eu