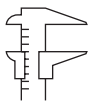


# ZEN SLIM

The thinnest high-energy modular batteries in the world.



Slimest modular batteries in the world

- + 135-mm height for restricted volumes
- + 3 formats available in 11, 16 & 21 kWh
- + Stacking for optimal integration
- + Mix & match with all ZEN SLIM batteries



Excellent energy density

- + Premium NMC pouch cells
- + 166 Wh/kg and 200 Wh/L



Exclusive cycle life & safety

- + 5,000 cycles
- + Liquid thermal management
- + Controlled charge and discharge currents
- + Best-in-class proprietary BMS technology
- + R100-2; R10.5 certifications



Best value for performance

**FORSEE**  
**POWER**

# Zen 1 1 high-energy Li-ion NMC extra slim battery module

PHYSICAL SPECIFICATIONS	CONDITIONS	UNIT	# MODULES CONNECTED IN SERIES							
			1	2	3	4	5	6	11	14
<b>VOLTAGE</b>										
Minimal		V	44.8	89.6	134	179	224	269	493	627
Nominal		V	59.7	119	179	239	298	358	656	836
End of charge		V	68.8	138	206	275	344	413	757	963
<b>ENERGY / CAPACITY</b>										
Nominal energy	1C, BOL, @25°C	kWh	10.6	21.1	31.7	42.2	52.8	63	116	148
Nominal capacity	1C, BOL, @25°C	Ah	177							
Minimum capacity available	1C, BOL, @25°C	kWh	10.3	20.6	31.0	41.3	51.6	61.9	114	144
Minimal capacity	1C, BOL, @25°C	Ah	172.5							
<b>POWER</b>										
Peak power in charge / discharge*	SOC 50%, @25°C	kW	21.1	42.2	63.4	84.5	105.6	127	232	296
Continuous power in charge / discharge*	SOC 50%, @25°C	kW	10.6	21.1	31.7	42.2	52.8	63.4	116.2	147.8
<b>CURRENT</b>										
Peak current in charge / discharge*	SOC 50%, @25°C	A (2C)	354							
Continuous current in charge / discharge*	SOC 50%, @25°C	A (1C)	177							
<b>ENERGY</b>										
Specific energy	-	Wh/kg	162							
Energy density	-	Wh/L	199							
Power density	-	W/kg	98							
<b>CYCLE LIFE</b>										
Cycle life**	-		5,000 cycles							
<b>MECHANICAL CHARACTERISTICS</b>										
Volume		Liter	53	-	-	-	-	-	-	-
Weight***		kg	65	130	195	260	325	390	715	910
Height		mm	135	-	-	-	-	-	-	-
Width		mm	465	-	-	-	-	-	-	-
Depth		mm	845							
<b>ADDITIONAL INFORMATION</b>										
Ingress protection rating	-		IP67							

SOC: State Of Charge      BOL: Beginning Of Life

\* Depending on cooling system, temperature and SOC

\*\* Depending on load profile, temperature and SOH

\*\*\* +/- 5kg for one module

# Zen 16 high-energy Li-ion NMC extra slim battery module

PHYSICAL SPECIFICATIONS	CONDITIONS	UNIT	# MODULES CONNECTED IN SERIES								
			1	2	3	4	5	6	7	8	9
<b>VOLTAGE</b>											
Minimal		V	67.2	134	202	269	336	403	470	538	605
Nominal		V	89.5	179	268.6	358	448	537	627	716	806
End of charge		V	103	206	309.6	413	516	619	722	826	929
<b>ENERGY / CAPACITY</b>											
Nominal energy	1C, BOL, @25°C	kWh	15.8	31.7	47.5	63.4	79.2	95.0	111	127	143
Nominal capacity	1C, BOL, @25°C	Ah	177								
Minimum capacity available	1C, BOL, @25°C	kWh	15.5	31.0	46.4	61.9	77.4	92.9	108	124	139
Minimal capacity	1C, BOL, @25°C	Ah	172.5								
<b>POWER</b>											
Peak power in charge / discharge*	SOC 50%, @25°C	kW	31.7	63.4	95.04	126.7	158.4	190	222	253	285
Continuous power in charge / discharge*	SOC 50%, @25°C	kW	15.8	31.7	47.52	63.4	79.2	95.0	110.9	126.7	142.6
<b>CURRENT</b>											
Peak current in charge / discharge*	SOC 50%, @25°C	A (2C)	354								
Continuous current in charge / discharge*	SOC 50%, @25°C	A (1C)	177								
<b>DENSITY</b>											
Specific energy	-	Wh/kg	164								
Energy density	-	Wh/L	218								
Power density	-	W/kg	98								
<b>CYCLE LIFE</b>											
Cycle life**	-		5,000 cycles								
<b>MECHANICAL CHARACTERISTICS</b>											
Volume		Liter	73	-	-	-	-	-	-	-	-
Weight***		kg	96.5	193	289.5	386	483	579	676	772	869
Height		mm	135	-	-	-	-	-	-	-	-
Width		mm	465	-	-	-	-	-	-	-	-
Depth		mm	1,158	-	-	-	-	-	-	-	-
<b>ADDITIONAL INFORMATION</b>											
Ingress protection rating	-		IP67								

SOC: State Of Charge      BOL: Beginning Of Life

\* Depending on cooling system, temperature and SOC

\*\* Depending on load profile, temperature and SOH

\*\*\* +/- 5kg for one module

# Zen 21 high-energy Li-ion NMC extra slim battery module

PHYSICAL SPECIFICATIONS	CONDITIONS	UNIT	# MODULES CONNECTED IN SERIES						
			1	2	3	4	5	6	7
<b>VOLTAGE</b>									
Minimal		V	89.6	179	269	358	448	538	627
Nominal		V	119.4	239	358	477	597	716	836
End of charge		V	137.6	275	413	550	688	826	963
<b>ENERGY / CAPACITY</b>									
Nominal energy	1C, BOL, @25°C	kWh	21.1	42.2	63.4	84.5	106	127	148
Nominal capacity	1C, BOL, @25°C	Ah	177						
Minimum capacity available	1C, BOL, @25°C	kWh	20.6	41.3	61.9	82.6	103	124	144
Minimal capacity	1C, BOL, @25°C	Ah	172.5						
<b>POWER</b>									
Peak power in charge / discharge*	SOC 50%, @25°C	kW	42.2	84.5	126.7	169	211	253	296
Continuous power in charge / discharge*	SOC 50%, @25°C	kW	21.1	42.2	63.4	84.5	105.6	126.7	147.8
<b>CURRENT</b>									
Peak current in charge / discharge*	SOC 50%, @25°C	A (2C)	354						
Continuous current in charge / discharge*	SOC 50%, @25°C	A (1C)	177						
<b>DENSITY</b>									
Specific energy	-	Wh/kg	166						
Energy density	-	Wh/L	229						
Power density	-	W/kg	99						
<b>CYCLE LIFE</b>									
Cycle life**			5,000 cycles						
<b>MECHANICAL CHARACTERISTICS</b>									
Volume		Liter	92	-	-	-	-	-	-
Weight***		kg	127.5	255	383	510	638	765	893
Height		mm	135	-	-	-	-	-	-
Width		mm	465	-	-	-	-	-	-
Depth		mm	1,471	-	-	-	-	-	-
<b>ADDITIONAL INFORMATION</b>									
Ingress protection rating	-		IP67						

SOC: State Of Charge      BOL: Beginning Of Life

\* Depending on cooling system, temperature and SOC

\*\* Depending on load profile, temperature and SOH

\*\*\* +/- 5kg for one module