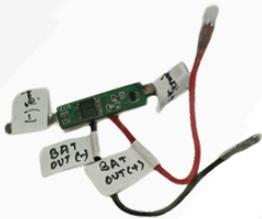


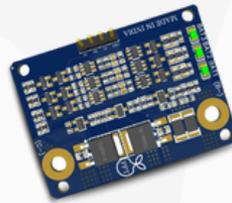
## BATTERY MANAGEMENT SYSTEM



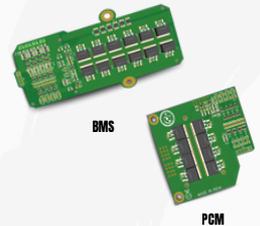
LIGEN BMS - 1S



LIGEN BMS - 2S



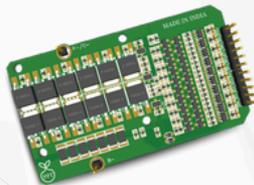
LIGEN BMS - 3S



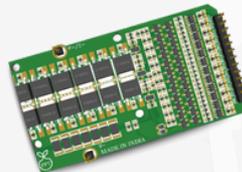
LIGEN BMS - 4S



LIGEN BMS - 8S



LIGEN BMS - 10S



LIGEN BMS - 12S



LIGEN BMS - 16S

# SPECIFICATIONS

LFP Cell

Parameter	Description	Specification			
Battery Management System (BMS) Model:					
		1S	2S	3S	4S
Discharge	Continuous Discharge Current	1-100 A	1-100 A	1-100 A	10-100 A
	Charging Voltage	3.65 V	7.30 V	10.95 V	14.6 V
Charging	Recharging Current	1-100 A	1-100 A	1-100 A	10-100 A
	Over-charge Detection Voltage	3.65 ± 0.025 V			
Over-charge Protection	Over-charge Protection Delay	1200 ms			
	Over-charge Release Voltage	3.45 ± 0.05 V			
	Battery Balance Detection Voltage	3.6 V			
Balancing	Battery Balance Release Voltage	3.6 V			
	Battery Balance Current	74 mA			
	Over-discharge Detection Voltage	2.5 ± 0.05 V			
Over-discharge Protection	Over-discharge Protection Delay	140 ms			
	Over-discharge Release Voltage	3.0 ± 0.05 V			
	Over-current Detection Delay	8 ms			
Over-current Protection	Over-current Protection Release Condition	Disconnect Load/Initiate Charge			
	Short-circuit Protection Condition	Short-circuit of External Load			
Short-circuit Protection	Short-circuit Detection Delay	250 μs			
	Short-circuit Protection Release Condition	Disconnect Load			
	Over and Under Protection During Charge	0-48 °C			
Temperature Protection	Over and Under Protection During Discharge	-10-54 °C			
	Self-consumption	Working Current	≤ 20 μA		
Sleeping Current		≤ 10 μA			
Operating Temperature	Temperature Range	-30 to 85 °C			

NMCLCO Cell

Parameter	Description	Specification			
Battery Management System (BMS) Model:					
		1S	2S	3S	6S
Discharge	Continuous Discharge Current	1-100 A	1-100 A	1-100 A	10-100 A
	Charging Voltage	4.25 V	8.50 V	12.75 V	25.5 V
Charging	Recharging Current	1-100 A	1-100 A	1-100 A	10-100 A
	Over-charge Detection Voltage	4.28 ± 0.025 V			
Over-charge Protection	Over-charge Protection Delay	150 ms			
	Over-charge Release Voltage	4.08 ± 0.05 V			
	Battery Balance Detection Voltage	4.2 V			
Balancing	Battery Balance Release Voltage	4.2 V			
	Battery Balance Current	74 mA			
	Over-discharge Detection Voltage	2.4 ± 0.05 V			
Over-discharge Protection	Over-discharge Protection Delay	40 ms			
	Over-discharge Release Voltage	2.9 ± 0.05 V			
	Over-current Detection Delay	8 ms			
Over-current Protection	Over-current Protection Release Condition	Disconnect Load/Initiate Charge			
	Short-circuit Protection Condition	Short-circuit of External Load			
Short-circuit Protection	Short-circuit Detection Delay	250 μs			
	Short-circuit Protection Release Condition	Disconnect Load			
	Over and Under Protection During Charge	0-48 °C			
Temperature Protection	Over and Under Protection During Discharge	-10-54 °C			
	Self-consumption	Working Current	≤ 20 μA		
Sleeping Current		≤ 10 μA			
Operating Temperature	Temperature Range	-30 to 85 °C			

Parameter	Description	Specification			
Battery Management System (BMS) Model:					
		8S	10S	12S	16S
Discharge	Continuous Discharge Current	10-100 A			
	Charging Voltage	29.2 V	36.5 V	43.8 V	58.4 V
Charging	Recharging Current	10-100 A			
	Over-charge Detection Voltage	3.65 ± 0.025 V			
Over-charge Protection	Over-charge Protection Delay	1200 ms			
	Over-charge Release Voltage	3.45 ± 0.05 V			
	Battery Balance Detection Voltage	3.6 V			
Balancing	Battery Balance Release Voltage	3.6 V			
	Battery Balance Current	74 mA			
	Over-discharge Detection Voltage	2.5 ± 0.05 V			
Over-discharge Protection	Over-discharge Protection Delay	140 ms			
	Over-discharge Release Voltage	3.0 ± 0.05 V			
	Over-current Protection Voltage	200 mV			
Over-current Protection	Over-current Protection Release Condition	Disconnect Load/Initiate Charge			
	Short-circuit Protection Condition	Short-circuit of External Load			
Short-circuit Protection	Short-circuit Detection Delay	250 μs			
	Short-circuit Protection Release Condition	Disconnect Load			
	Over and Under Protection During Charge	0-48 °C			
Temperature Protection	Over and Under Protection During Discharge	-10-54 °C			
	Self-consumption	Working Current	≤ 20 μA		
Sleeping Current		≤ 10 μA			
Operating Temperature	Temperature Range	-30 to 85 °C			

Parameter	Description	Specification			
Battery Management System (BMS) Model:					
		7S	10S	13S	15S
Discharge	Continuous Discharge Current	10-100 A			
	Charging Voltage	29.75 V	42.5 V	55.25 V	63.75 V
Charging	Recharging Current	10-100 A			
	Over-charge Detection Voltage	4.28 ± 0.025 V			
Over-charge Protection	Over-charge Protection Delay	150 ms			
	Over-charge Release Voltage	4.08 ± 0.05 V			
	Battery Balance Detection Voltage	4.2 V			
Balancing	Battery Balance Release Voltage	4.2 V			
	Battery Balance Current	74 mA			
	Over-discharge Detection Voltage	2.4 ± 0.05 V			
Over-discharge Protection	Over-discharge Protection Delay	40 ms			
	Over-discharge Release Voltage	2.9 ± 0.05 V			
	Over-current Detection Voltage	8 ms			
Over-current Protection	Over-current Protection Release Condition	Disconnect Load/Initiate Charge			
	Short-circuit Protection Condition	Short-circuit of External Load			
Short-circuit Protection	Short-circuit Detection Delay	250 μs			
	Short-circuit Protection Release Condition	Disconnect Load			
	Over and Under Protection During Charge	0-48 °C			
Temperature Protection	Over and Under Protection During Discharge	-10-54 °C			
	Self-consumption	Working Current	≤ 20 μA		
Sleeping Current		≤ 10 μA			
Operating Temperature	Temperature Range	-30 to 85 °C			