

APTIX ONE 4S1P Li-ion

Advanced Lithium-ion technology for maximum performance, run-time and safety in electronic devices. Custom Power Lithium-ion batteries offer simplified access to the latest battery technology for electronic product design, prototyping and manufacturing. Powered by high-performance rechargeable cells from Molicel.

MOLICEL® INR18650 M35A

Manufactured in the UK.

Part Number: CP4135-2 **Nominal Ratings:** 14.4V, 3.5Ah, 50.0Wh **Chemistry:** Li-ion INR

Electrical Specification: *1

Charge:

Charge Profile	CC/CV
Charge Management	JEITA
Max Charge Voltage:	16.8V
Max Charge Current:	1.7A
Charge Termination:	0.1A
Charge Temperature Range (current limited) *2:	0 to 60°C
Charging Time:	2.5 hours

Discharge:

Min Discharge Voltage*3:	10.0V
Max Discharge Current*4:	5.0A
Discharge Temperature Range*2/*5:	-40 to 60°C

Electrical Interface:

Connector:	Molex Mini-Fit Jr 39012045
Pinout (1-4):	Positive/SMBD/SMBC/Negative
Lead Length:	200mm

Mechanical & Functional Specification:

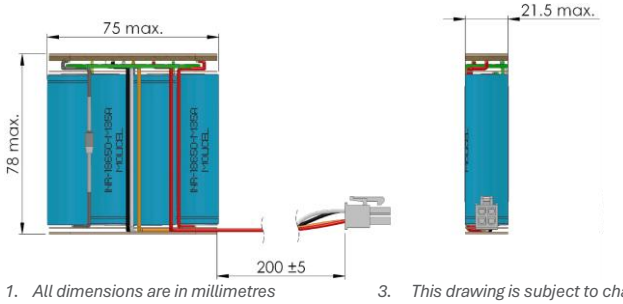
Mechanical:

Maximum Dimensions:	78.0 x 74.0 x 18.5 mm
Enclosure*6:	Soft Pack (Heat-Shrink Sleeve)
Nominal Mass:	200g
Ingress Protection:	Not IP Rated

System:

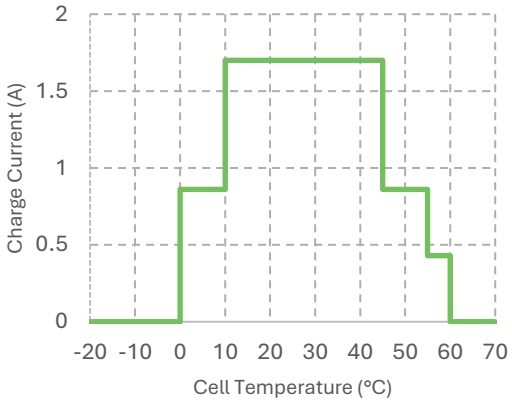
Communications:	SBS SMBus v1.1 interface
Security:	SHA-1 Authentication (optional)
Protection:	CUV/COV/OCD/OCC/OTD/ OTC/UTD/UTC/SCD/SCC
Compliance:	UN38.3, CE, Pre-compliant to IEC 62133-2 & UL 62133-2

Package Dimensions:

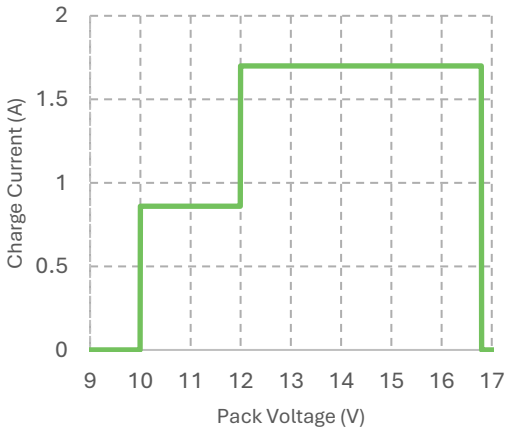


1. *All dimensions are in millimetres*
2. *Packs are shown without external sleeving for clarity*
3. *This drawing is subject to change without notice*

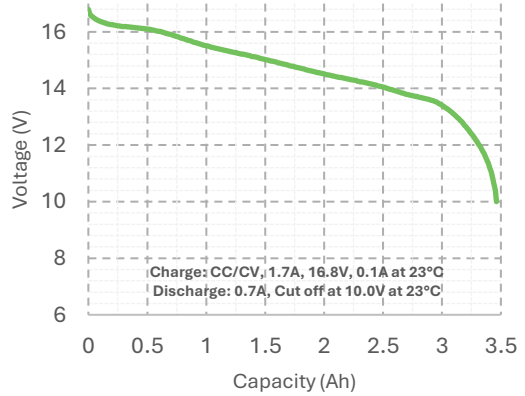
Max Charge Current/Cell Temperature:



Max Charge Current/Battery Voltage:



Discharge Characteristics:



Safety, Storage & Transportation:

Outline safety warning: Use only within the allowed parameters.

Do not short circuit or overload the battery. Use only an approved charger. Avoid heat and operation outside the specified temperature range. Never crush, puncture, or dismantle the pack or disable protective circuits. Built-in protections are a last resort -host equipment must ensure safe operation.

You should also consult the following documents:

1. INR-18650-M35A Cell Data Sheet.
2. Material Safety Datasheet.

Do not use the battery if you suspect it may be faulty or damaged.

Storage	Unit	Nominal	Minimum	Maximum[*7]
Temperature	°C	+20	-20	+35
Duration	Months			12
Store at 50% state of charge for optimum life. Do **NOT** store in a discharged condition.				

Transport Regulations: All lithium, lithium-ion, and lithium polymer cells and batteries must pass UN tests before they can be transported by road, rail, sea, or air. Cells and batteries exceeding certain lithium content or "lithium equivalence" limits must be shipped as Class 9 hazardous goods under UN3480. Batteries below these limits may be transported as non-hazardous, subject to specific exemptions.

Disclaimer: We do not claim to be experts in regard to transport regulations, shipping, packing etc. Users and prospective users of lithium, lithium-ion and/or lithium polymer cells and/or battery packs should consult a qualified person for definitive information, e.g. a Dangerous Goods Safety Advisor. Custom Power, its owners, directors, employees and servants cannot accept any responsibility for the accuracy of the above information.

1 The battery pack may shut off outside these values. The battery is protected with a BMS, which should be used as a last line of defence within the host system. Refer to technical specification for further details.

2 The battery protection circuit monitors cell temperature and may cause early shutdown of the device if localised heating is detected near the battery temperature sensors.

3 This is the voltage at which the pack is considered discharged. If your equipment continues to discharge the battery below the minimum figure indicated, the battery may be damaged and/or its life reduced.

4 Short duration current peaks above the stated maximum may trigger protection. Contact Custom Power for higher current requirements.

5 The battery capacity may need to be de-rated at high and low temperatures. In particular, low temperatures will increase internal resistance and reduce the capacity. High temperatures will increase self-discharge and reduce battery life. See our website for more information.

6 Batteries are supplied as 'soft packs' for integration into host equipment and are not user-replaceable. The battery pack is not IP rated and CE compliance of the final product remains the responsibility of the system manufacturer.

7 Storage at up to 50°C permissible within guidelines. Prolonged storage at high temperatures will dramatically shorten life. See our website for more information.

IMPORTANT – CONDITIONS OF USE AND LIMITATIONS:

I. ***Operating limits*** *– The battery pack shall only be installed, operated and stored within the electrical, thermal, mechanical and environmental limits specified in this datasheet and applicable product documentation.*

II. ***Charging*** *– The battery shall only be charged using a charger verified by Custom Power and configured for the specified battery chemistry, voltage, current and charging profile.*

III. ***System integration*** *– The customer is responsible for ensuring correct integration of the battery into the host system and for preventing operation outside the specified battery limits.*

IV. ***BMS and protection*** *– The BMS, protection systems, firmware, cells, wiring, connectors or other battery components shall not be bypassed, disabled, modified or reconfigured without prior written approval from Custom Power.*

V. ***Modification and repair*** *– The battery shall not be disassembled, repaired, reconfigured or modified by the customer or any third party without prior written approval from Custom Power.*

VI. ***Misuse and abuse*** *– The battery shall not be subjected to over-charge, over-discharge, excessive current, short circuit, reverse polarity, excessive temperature, crushing, puncture, immersion, chemical exposure, fire, excessive shock or vibration, or any other condition outside the specified limits.*

VII. ***Performance specifications*** *– Published capacity, energy, current, cycle-life and other performance specifications apply only under the conditions stated in this datasheet. Actual performance and service life may vary depending on application and operating conditions.*

VIII. ***Application changes*** *– Any material change to the intended application, host equipment, charging system, electrical architecture, software, control strategy or operating profile shall be reviewed and approved by Custom Power prior to implementation.*

IX. ***Damage or abnormal events*** *– Following significant physical damage, abnormal heating, thermal event, electrical fault, over-charge, over-discharge, water ingress or other potentially hazardous event, the battery shall be removed from service and shall not be returned to operation until appropriately assessed.*

X. ***Intended application*** *– The suitability of the battery for the intended application must be reviewed and approved by Custom Power prior to use. Use of the battery in any application without such approval is not permitted.*

XI. ***System-level responsibility*** *– Custom Power's specification, testing or approval of the battery pack does not constitute approval, validation or certification of the customer's complete system. The customer remains responsible for system-level design, integration, validation and regulatory compliance.*

XII. ***Warranty*** *– Failure to comply with these conditions shall exclude the resulting failure, damage or performance degradation from the applicable product warranty.*

At Custom Power, we are committed to following the best practices in Environmental, Social, and Governance (ESG). We continually strive to integrate ESG principles into our core strategies, contributing to a sustainable and equitable future for all stakeholders. Find out more about what we are doing on our website.

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