

Product # CP0134	Issue # 3	Issue Date 28/09/2015	Origination Date 20/11/2014	Originator Patrick Smith	Page # 1/2
Battery Specification	Nominal Ratings: 3.6V, 3.4Ah			Composition: 1S1P NCR-18650BF	

NB: Actual voltage and capacity in use will be affected by various factors, including temperature, discharge rate, charge rate and method (if applicable), end point voltage, history (e.g. past use, storage) etc.



## CP0134 1S1P

Advanced Lithium-ion technology for maximum performance, run-time and safety in electronic devices.

Creasefield Lithium-ion batteries offer simplified access to the latest battery technology for electronic product design, prototyping and manufacturing. Powered by Panasonic. Manufactured in the UK.

<b>Mechanical Details</b>		NB: All dimensions are nominal. Sleeved packs are not weather proof and are designed to be installed in a protective case or within equipment. They are not intended to be handled by the end user of the equipment and will normally require hard cases before they can be repeatedly inserted and removed.	
Length	19mm	Leads	200mm
Depth	19mm	Connector	none
Height	73mm	Covering	PVC heat shrink
Weight	49g	Labelling	standard

Electrical Details	Unit	Nominal	Minimum	Maximum
Charge Current	mA	580	60	1475
Charge Voltage <sup>1</sup>	V	4.1		4.2
Charging Temperature	°C		+10	+45
Discharge Current <sup>2</sup>	mA	580		3000
Cut-off Voltage <sup>3</sup>	V	2.5	2.5	
Discharge Temperature <sup>4</sup>	°C		-20	+60

<b>Protection Devices</b>		NB: These devices are designed to protect the pack in the event of control circuit failures e.g. charger failure. They must not be used as a main means of charge/discharge control. Protection circuits have response times in the order of a few milliseconds.	
PCM Part No.	CBPB012	Polyswitch	SRP350F
Fuse	none	Bypass Diode	none
Thermal Fuse	none	Other	none

<b>UN T1-T8 Tested</b> ✓	The type 1S1P battery has passed the UN T1-T8 tests and may be shipped as excepted from these regulations.
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Product # CP0134	Issue # 2	Issue Date 20/11/2014	Origination Date 20/11/2014	Originator Patrick Smith	Page # 2/2
Battery Specification			Nominal Ratings: 3.6V, 3.4Ah		Composition: 1S1P NCR-18650BF

NB: Actual voltage and capacity in use will be affected by various factors, including temperature, discharge rate, charge rate and method (if applicable), end point voltage, history (e.g. past use, storage) etc.

**⚠ Outline safety warning: Use only within the allowed parameters.**

Do not short circuit or over-load the battery. Charge only using an approved charger designed specifically to charge this battery. Do not heat. Do not use above maximum temperatures indicated. Never crush, mutilate, puncture or abuse the battery. Do not dismantle the pack or disable any of the protective devices or circuits.

**⚠ Do not link packs in series or parallel.**

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

**⚠ You should also consult the following documents:**

- 1) NCR-18650BF Cell Data Sheet.
- 2) Material Safety Data Sheet.

Storage	Unit	Nominal	Minimum	Maximum <sup>5</sup>
Temperature	°C	+20	-20	+35
Duration	months			12

Store at 50% state of charge for optimum life. Do NOT store in a discharged condition.

**New transport regulations affecting lithium, lithium-ion and/or lithium polymer batteries came into force during 2003 and 2004.**

These regulations require that all lithium, lithium-ion and lithium polymer cells and batteries must pass a number of UN tests before they may be transported by road, rail, sea or air. In addition lithium, lithium-ion and lithium polymer cells and batteries containing more than certain limits of lithium or "lithium equivalence" must be shipped as Class 9 hazardous goods. For cells and batteries the classification is UN3480.

Batteries below these limits may be transported as non-hazardous. There are certain exceptions.

**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. Creasefield Ltd, its owners, directors, employees and servants cannot accept any responsibility for the accuracy of the above information.

1 4.1V is recommended to prolong life, at the cost of not charging to 100% capacity.

2 Batteries fitted with electronic protection circuits cannot normally deliver current pulses above the maximum figure, since the circuit has short response times.

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. If your equipment ceases to function at a voltage above the maximum figure, you may not recover the full battery capacity.

4 The battery may need to be derated at high and low temperatures. In particular, low temperatures will increase internal resistance and reduce the capacity, which can be recovered, particularly at high currents. High temperatures will increase self discharge and reduce battery life. See our website for more information.

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