PROPRIETARY INFORMATION: PROPRIETARY OF GLOBTEK, INC. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING, IN WHOLE OR IN PART, IS HEREBY PROHIBITED EXCEPT AS SPECIFIED IN WRITING BY GLOBTEK, INC. **REVISION HISTORY** REV **DESCRIPTION** SALES RFS DATE APPROVED Α INITIAL RELEASE MS 25549 6/6/2014 HMCHANGE OUTPUT CABLE LENGTH FROM 50 mm TO 152 mm, ADD BATTERY PACK THICKNESS MS 25560 6/23/2014 HM ADD 'CAUTION' INFORMATION ON THE LABEL MS 25646 9/30/2014 НМ 25701 НМ CHANGE THICKNESS FROM 25±2 mm TO 22.5 mm MAX, MS 11/13/2014 CHANGE LENGTH FROM 130.4 mm TO 133.0 mm (Max), CHARGING CURRENT FROM 1.3A TO 0.8A TO 1.0A, CHANGE THE IMPEDANCE FROM 300 mohm TO <450 mohm, ADD CHARGE MANAGEMENT IC BQ2933ODBRT AND MOS AO4407, CHANGE CHARGER INPUT VOLTAGE FROM 18 V TO 17.5 - 20V, CHANGE CHARGER INPUT CURRENT FROM 2.0A MAX TO 0.8 -1.0A, CHANGE MAX. CHARGING VOLTAGE FROM 16.8±2% TO 16.8 ± 0.168V, **DELETE CHARGING RATE 1.0A** CHANGE CHARGING TIME FROM 3h TO 4 h UPDATE LABEL IIN FROM 2.0A TO 1.0A

RELEASEDBy N.Frost at 1:51 pm, Nov 20, 2014

⊕ GlobTek; Inc.	Drawing Title: 4S1P Lithium-Ion Battery Pack with Built-in		
www.globtek.com	Fuel Gauge and Charger,4 Cells, 14.8Volts@3100mAh		
186 Veterans Drive, Northvale, NJ 07467	MODEL NO: NCR18650A		
Tel. 201-784-1000 Fax 201-784-0111	PART NO: BL3100C1865004S1PGSA	REV D	

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By customer signing or accepting this document, they agree to acknowledge and accept the Guidelines and cautions, Safety Notes, and Safety Precautions published on GlobTek's website http://en.globtek.com/safety-cautions.php#.UUD-NRzU_I8

GlobTek offers a 5-year warranty on workmanship and electrical components assembly on all new battery pack products excluding t the battery cells themselves which are covered by the Manufacturer's original warranty at their published warranty period. Please refer to the manufacturer's warranty policy for cells. For GlobTek brand cells, GlobTek provides a 12-month warranty for Li-Ion batteries. The warranty period is based upon the expectation that the battery will deliver 80% of its initial capacity after 300 cycles at low to moderate power loads. High power loads may cause a battery to reach 80% of initial capacity in less than the 12-month warranty period. Li-Ion batteries will continue to operate below the 80% capacity threshold; however, the capacity (run time) delivered between charges will continue to decrease.

The purchaser of this product (Customer) agrees that it is their sole responsibility to determine suitability of the product described for their application and to take precautions for protection against any hazards attendant to the handling and use of the product. Products sold are not returnable. GlobTek, Inc. will produce or provide its products to our published specifications. The purchaser of this product (Customer) shall be solely responsible for determining the products' fitness for use in their applications.

Customer Approval of Specification:

Please approve, sign and send back to GlobTek so we can complete order processing.

A delay in receipt of this form will delay delivery schedule.

Company Name:

Customer P/N:

Quote Number:

Date:

Authorized Representative Name:

Foot Note:

Globtek Inc. will not be liable for the safety and performance of these power supplies if unauthorized access and repair occurs. End user should consult applicable UL, CSA or EN standards for proper installation instruction.

Limitation of Use:

Globtek product are not authorized for use as mission critical components in life support hazardous environment, nuclear or aircraft applications without prior written approval from the CEO of Globtek Inc.

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NOTES:

DIMENSIONS ARE IN MM UNLESS SPECIFIED OTHERWISE.

1. ELECTRICAL SPECIFICATIONS:

Rated Capacity3100mAh TypicalNominal Voltage14.8VoltsWatt-Hour Rating45.88Watt Hour

2. GENERAL SPECIFICATIONS:

Cell Brand Panasonic Cell Size Cylindrical 18650 Cell Configuration 4S1P Thermistor (NTC) Inside Pack None Maximum Discharge Current 1C Minimum Discharge Voltage 9.6 Volts <450 milli Ohms Internal Impedance Protection Module Bult-in inside the battery pack

Pack ID None
Fuel Gauge IC Used BQ20Z70-V160
Fuel Gauge Data Access Method SMBus
MOS: AO4407
WEIGHT: 190

3. CHARGER SPECIFICATIONS:

Charger Circuit Built-in inside the battery pack

Charging Method Constant Current and Constant Voltage

Charge Termination Method Minimum Charge Current and Safety Timer as back-up

Charge Management IC: BQ2933ODBRT

Charger Input Voltage 17.5 to 20 Volts

Charger Input Current 0.8 to 1.0 A (Max)

Charging Time (Approximate) 4 Hours

Max. Charging Voltage 16.8 \pm 0.168 Volts \pm 2%

4. Protection

Overcharge Voltage 17.2 Volts
Overdischarge Voltage 11 volts

Overtemperture Overtemperature circuit built-in inside the protection module

5. AMBIENT CONDITIONS:

Ambient Temperature During Charging 0°C to +40°C

Ambient Temperature During Discharging -20°C to +60°C

Storage Temperature and Charge Retention 1 Year at -20C to +20C; >80%

3 Months at -20C to +45C; >80% 1 Month at -20C to +60C; >80%

Humidity 65 +/- 20% Relative Humidity

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6. REGULATORY APPROVALS

Cells Approved To UL 1642

Pack Approved To

ROHS Complies with EU 2002/95/EC and China SJ/T 11363-2006

Transportation Designed to meet UN 38.3

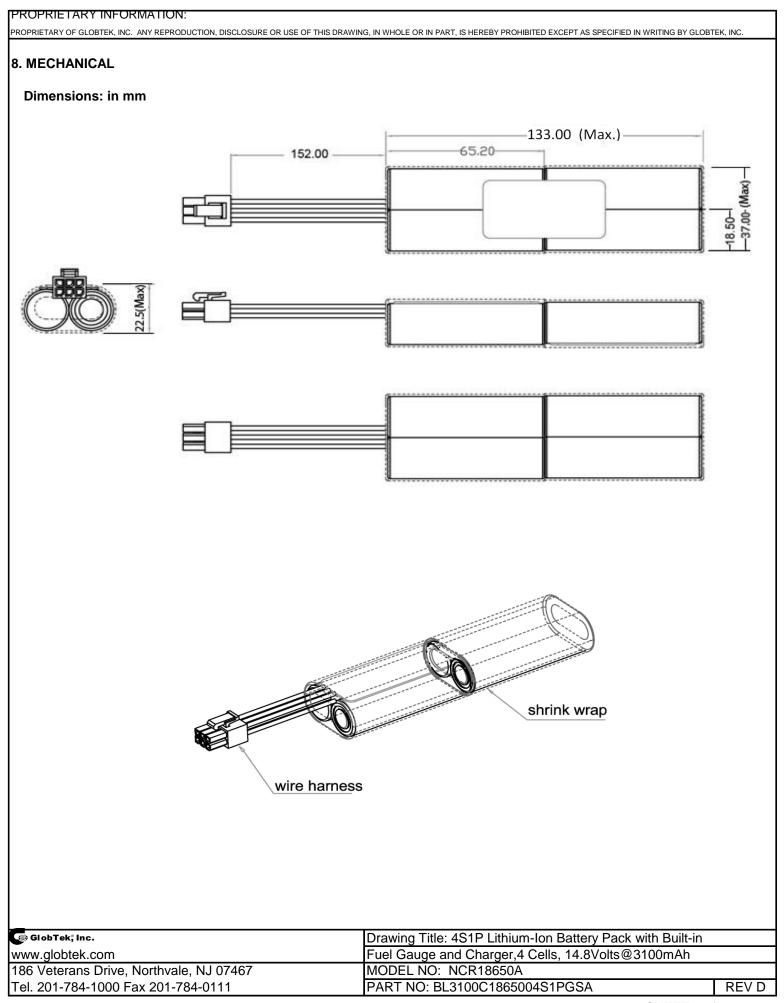
7. WARRANTY

Warranty 5 years warranty on the battery pack excluding the cells themselves

which are covered by the Manufacturer's original warranty at their published warranty period. Please refer to the manufacturer's

warranty policy for cells.

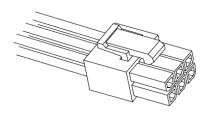
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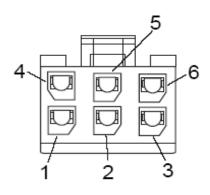
9. OUTPUT CORD AND CONNECTOR:

ACTUAL CONNECTOR'S, OVERMOLDS, FERRITES, MAY VARY SLIGHTLY FROM THE PICTURE BELOW



		1
Equivalent	Y/N	
Cable Type		UL1007
Cable Length		152 mm
Wire gauge		20 AWG
Connector	Υ	Molex 6-pin P/N: 43025-0600
Terminals	Υ	Molex P/N: 43030-0001
Pin Assigment and Wire Color		Pin 1: Vin+(Red)
		Pin 2: COM(Black)
		Pin 3: SMBC(Yellow)
		Pin 4: SMBD(Green)
		Pin 5: BAT+(Red)
		Pin 6: COM(Black)
Other requirements		N/A

FRONT VIEW



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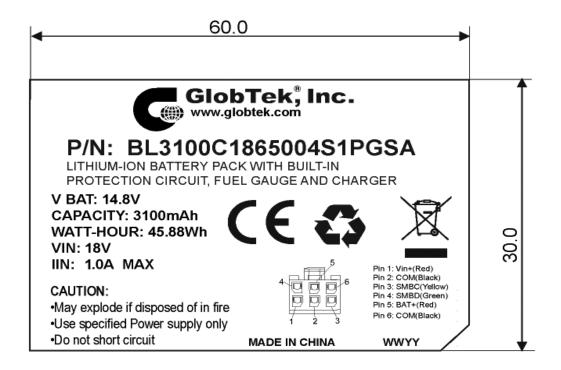
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10. LABEL:

MATERIAL FLAT THERMAL TRANSFER, IMPRINTABLE, POLYESTER SHEET

BACKGROUND COLOR: WHITE OR SILVER

TEXT COLOR: BLACK
LABEL WIDTH: (mm) 60.0 mm
LABEL HEIGHT: (mm) 30.0 mm

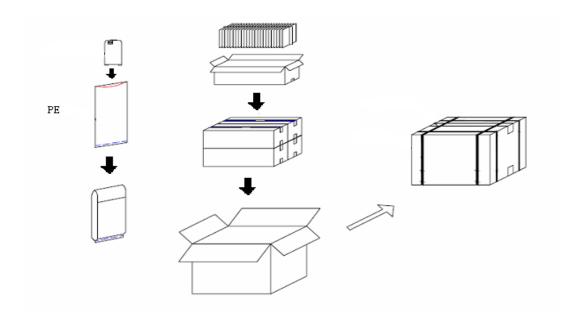


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11. PACKING

PE BAG SIZE	TBD
CARTON SIZE:	TBD
QUANTITY PER CARTON:	TBD
G.W.	TBD



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