

HONG KONG BATTERIES MANUFACTORY LIMITED



Model No. HK18650S20 for (Power Tool 15A Output)

: SCOPE

This Specification describes the requirements of the lithium-ion rechargeable battery supplied by HONG KONG BATTERIES Under GB/T1827-2000, UL1642, & IEC61960-1: 2000



NOMINAL SPECIFICATONS : (I)

No.	Item	Specification
	Model:	HK18650S20
	Application Special for:	High Drain 15A output for Power Tool
	Nominal Capacity (0.5CA):	1550 mAh discharge 0.5CA OR Mini 1500 mAh
	Nominal Voltage :	3.7V
	End Cut off Voltage :	2.75V
	Maximum Charge Current :	Rapid 3CA / Max. 5CA
	Maximum Discharge Current :	15A max. Pulse discharge current 5.0CA Max. Continuous discharge Current 1.0 CA Standard Discharge Current
	Ratio Capacity Performance :	1C = 100% , 5C ≥ 95%, 8C ≥ 90% 10C ≥ 80% Charge 0.5C to 4.2V then discharge to 2.75V per cell
	Maximum Charge Voltage :	4.2V Tolerance ± 0.03V
	Charge method :	CC/CV (constant current/constant voltage)
	Internal Resistance :	Max 40 mΩ (at 1 KHZ after complete charge)
	Dimension :	Diameter : 18.3 ± 0.1mm Height: 65.2 ± 0.5 mm
	Weight:	About 42 (g) only for Reference.
	Operating Temperature :	Charging Temperature: 0~45 Discharging Temperature: -20~60
	Storage Temperature & Percentage of Retention :	1 month -5~35 (80% Recoverable) 6month 0~35 (80% Recoverable)
	Temperature Performance:	55 ± 2 for 2 hrs discharge to 2.75V ≥ 1350 mAh -20 ± 2 for 16 hrs discharge to 2.75V ≥ 1050 mAh
	Relative Humidity:	65 ± 20% for store condition
	Visual Requirements :	Defects, such as scratches, flaws, dirty spots, rust, deformation, discoloration, leakage, etc., which damages commercial values shall not be presented.
	Cycle Life Performance :	≥ 300 cycles at 100% Charge 1AC, then discharge 5AC
	UL is being process; CE/EMC and ROHS compliance are all available.	
	HkbiL reserves the right to alter or amend the design & specification without prior notice.	

STANDARD CONDITION FOR TEST: (II)

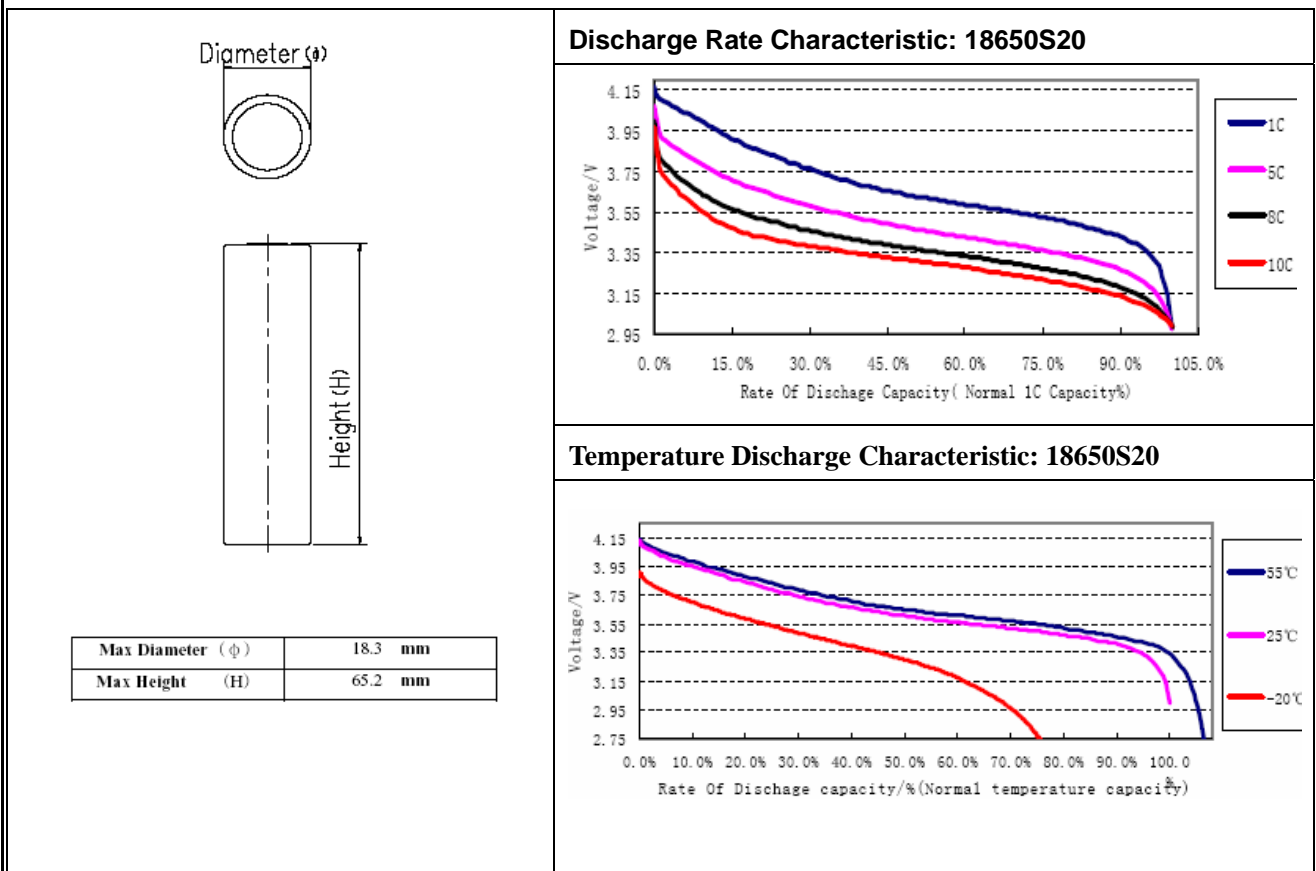
Unless otherwise specified, all test stated in this specification are conducted at Ambient Temperature:

25±5 ; Relative Humidity:65±20%

Standard Charge	Constant Current and Constant Voltage (CC/CV) ,Current:1500mA Final Charge voltage: 4.2V , Final Charge Current: 15mA	
Standard Discharge	Constant Current (CC) , Current: 1500mA , End Voltage: 2.75V	
Items	Test process (Safety Performance)	Requirements
Short Circuit	The Cell is to be short-circuited by connecting the positive and negative terminal of the cell directly with copper wire with a resistance of less than 0.05Ω.	No fire, No explosion.
Impact Test	After complete charge according to requirement above, put the cell on the table-board of impact instrument. And then put a steel cylindrical bar perpendicular to the longitudinal axis of cell. The 9.1kf weight is dropped form height of 0.6m and pounds the cell via steel bar.	No fire, No explosion.
Overcharge (3C/5V)	The cell with be discharge to 3.0V with 1C. Then charge the cell to 5Vwith 3C, until the charge current decrease to 0. After still keeping in charging for 30min, the testing finish.	No fire, No explosion.
Hot Box test	After complete charge according to the requirement above, left it in the oven and heated at (5 ±2)/min, up to 130± 2 and keep at 130±2 for 30min.	No fire, No explosion.

Contact Our Technical Center and Contribution outlet for Precaution and Packing: (III)

FIGURE DIMENSION & CHARACTERISTICS : (IV)



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