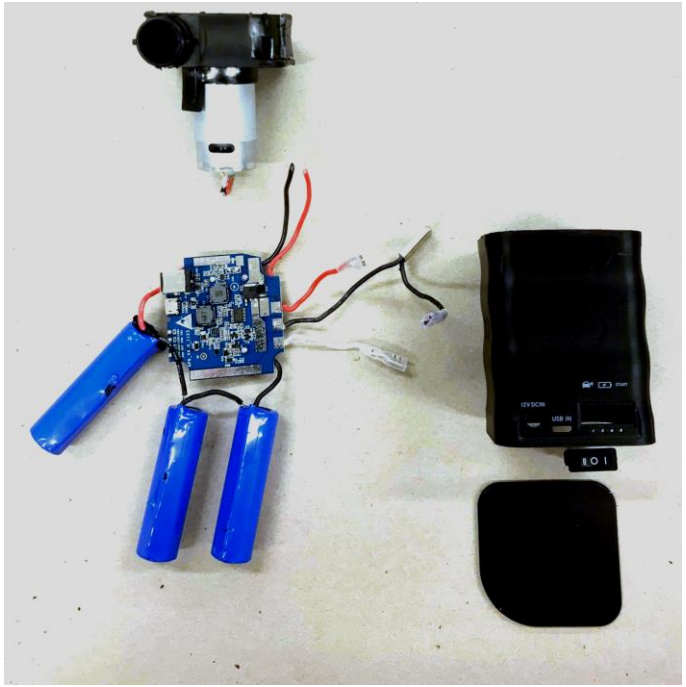
START OF TECHNICAL SLIDES



Bill of materials and blown up view

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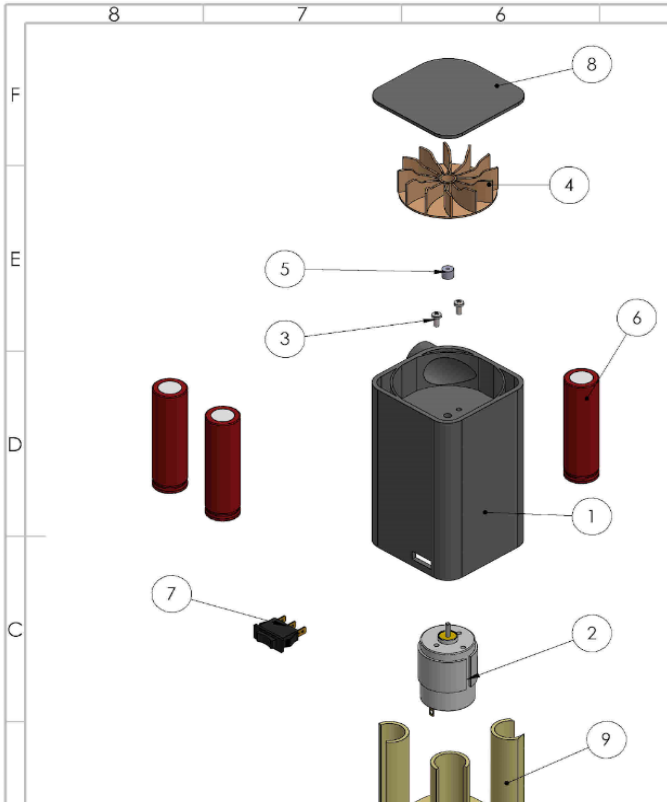
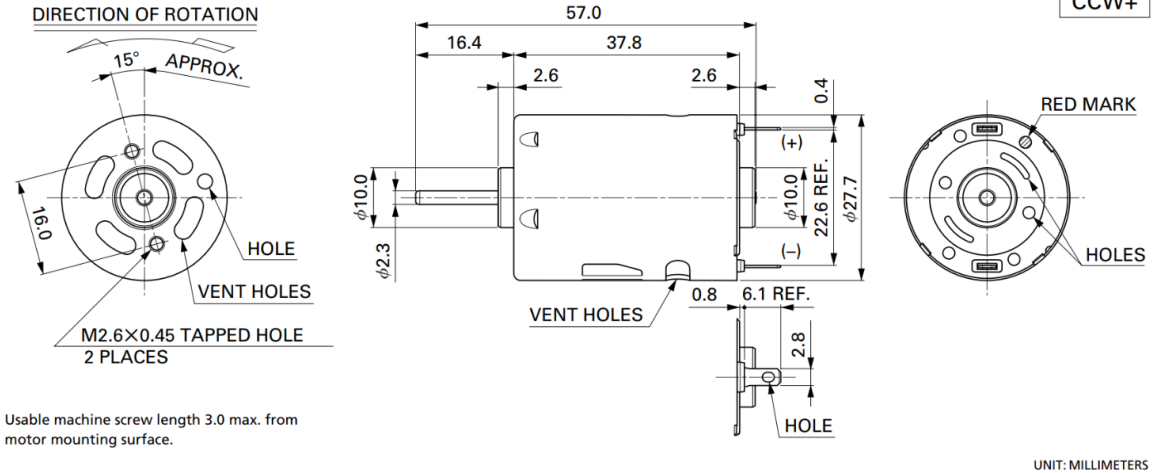


ITEM NO.	PART NUMBER	DESCRIPTION	material property	QTY.
1	Main body	Outer shell of the whole air blower	ABS	1
2	Mabuchi RS-385Sh-2270	12 V dc motor, that has a nominal rpm at max efficiency of 8170 RPM	N/A	1
3	BS EN ISO 7045 - M2.5 x 6 - Z - 6N	screws to hold the motor to the body	Steel	2
4	80 mm Impeller	Impeller with 12 vanes	ABS	1
5	Brass couple	Acts as a couple between the motor shaft and the Impeller	Brass	1
6	18650 Li-Ion battery	2000 mAh battery	Lithium	3
7	KCD3-103	Rocker switch with on-off-on state	PA-66 nylon	1
8	End cap	end covers over the top and bottom of the air blower	ABS	2
9	Inner frame	Inner frame holding all the batteries and pcb together.	ABS	1
10	Printed Circuit Board	PCB with all the electronics	fiber glass+electronics	1
11	KSD9700 Bimetal Temperature Control Switch Thermostat	Thermal cutoff to prevent overheating of batteries		1

Mabuchi RS-385 DC motor Specification



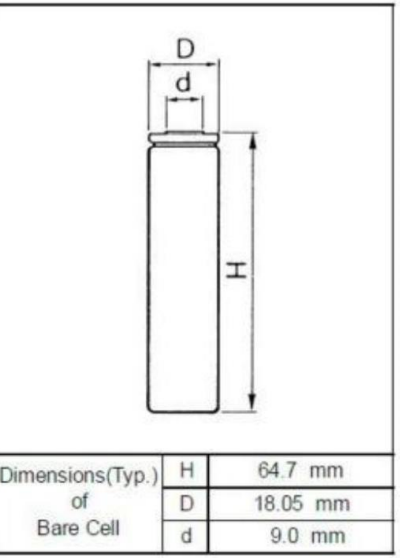
Usable machine screw length 3.0 max. from motor mounting surface.

Interesting things about the motor:
- High rpm for a fan
- high power consumption

Typical applications:
- Hair Dryer
- Printer/Copy machine
- Ideal to make an air blower or compressor

MODEL	VOLTAGE		NO LOAD		AT MAXIMUM EFFICIENCY					STALL		
	OPERATING RANGE	NOMINAL	SPEED	CURRENT	SPEED	CURRENT	TORQUE		OUTPUT	TORQUE		CURRENT
			r/min	A	r/min	A	mN·m	g·cm	W	mN·m	g·cm	A
RS-385SH-2270 (*1)	6~24	12V CONSTANT	10000	0.20	8170	0.89	7.89	80.5	6.74	43.2	440	4.00

18650 Battery Specification



Dimensions(Typ.) of Bare Cell	H	64.7 mm
	D	18.05 mm
	d	9.0 mm

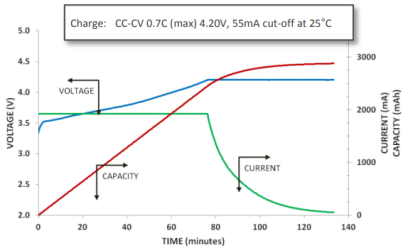
The interesting thing is:

- -LITHIUM ION battery
- High power output
- -Rechargeable
- -High energy density
- -long stable power and long run time
- -ideal for notebook PCs, boosters, portable devices etc
- IN our donor product, we have 3 batteries with a total capacity of 6600mAh

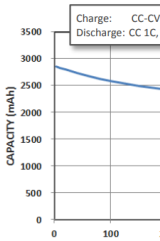
5. BASIC CHARACTERISTICS

5.1 Capacity（25±5℃）	Nominal Capacity：2600mAh (0.52A Dis 2.75V) Typical Capacity：2550mAh（0.52A 2.75V） Minimum Capacity：2500mAh Discharge，2.75V)
5.2 Nominal Voltage	3.7V
5.3 Internal Impedance	≤ 70mΩ
5.4 Discharge Cut-off Voltage	3.0V
5.5 Max Charge Voltage	4.20±0.05V
5.6 Standard Charge Current	0.52A
5.7 Rapid Charge Current	1.3A
5.8 Standard Discharge Current	0.52A
5.9 Rapid Discharge Current	1.3A
5.10 Max Pulse Discharge Current	2.6A
5.11 Weight	46.5±1g
5.12 Max. Dimension	Diameter(Ø): 18.4mm Height (H): 65.2mm
5.13 Operating Temperature	Charge: 0 ~ 45℃ Discharge: -20 ~ 60℃

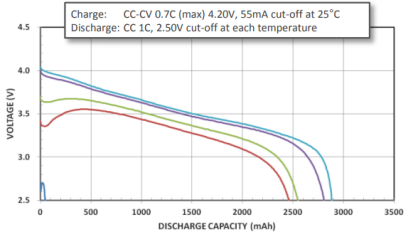
Charge Characteristics



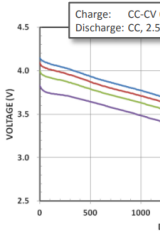
Cycle Life Charact



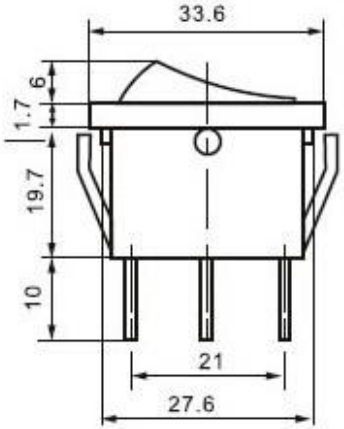
Discharge Characteristics (by temperature)

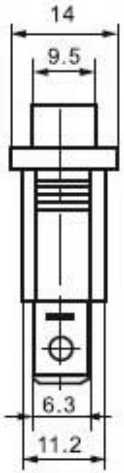


Discharge Charact



KCD3-103 rocker switch Specification





KCD3-103
10A 250V/AC 15A 125V/AC

-KCD3-103 rocker switch
- comes with three settings
-Max voltage: 250V
-Max current: 5A
- can be used in our future product

KSD 9700 Thermal cut-off Specification

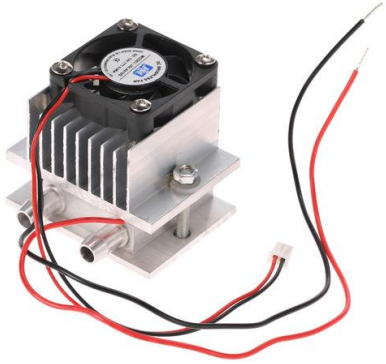
KLS5-KSD9700 Thermal Fuse Series

Rated Voltage: AC250V/AC125V;
Rated Current: 5A ~ 7A
Electric intensity: 800V Min.
Contact resistance: 30mΩ Max.
Lnsulation resistance: 100MΩ Min.
Response speed: ≤1°C/ min
Number of automatic cycles: 6000 Max. (Resistive Load)

Interesting things:
-Thermal fuse that will cut off if the temperature of the batteries gets too hot.
- Uses a bimetallic structure to cut off the current
- Cut off temperature and reset temperature is different for different models

Hardware we can get

We can get a peltier cooler to aid in preservation of samples.



We will requires a mechanical force multiplier that would compress samples taken from nature. That will require steel gears to transfer the power from the motor.