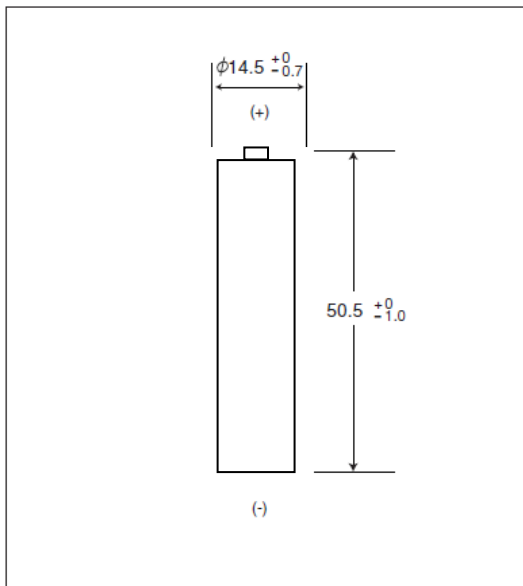


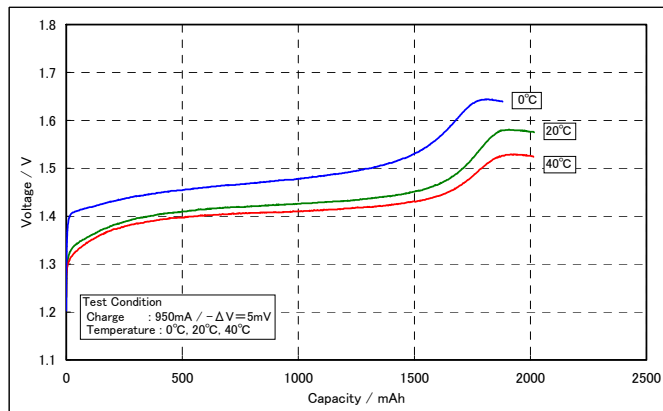
HHR-3MVE

■ Dimensions (with tube)

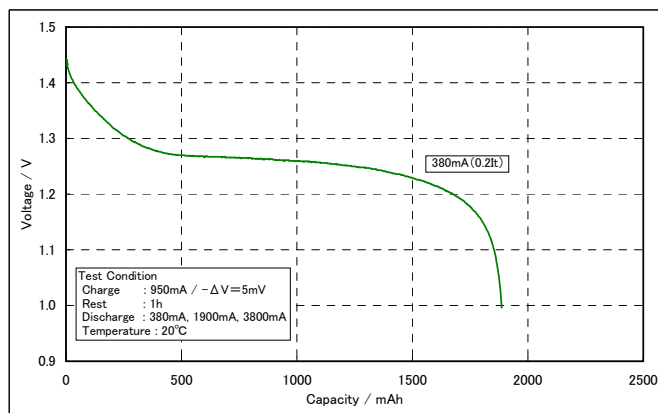
(mm)



■ Typical charge characteristics



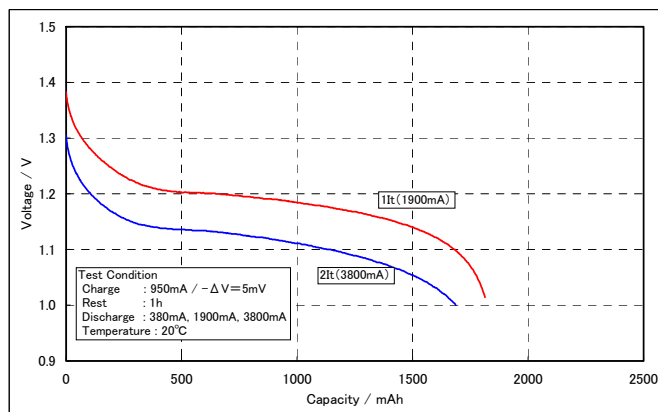
■ Typical discharge characteristics



■ Specifications

Diameter	14.5+0/-0.7	mm
Height	50.5+0/-1.0	mm
Weight	Approx. 27	g

Nominal Voltage		1.2V	
Discharge Capacity *1	Average *2	1980mAh	
	Rated (min)	1900mAh	
Approx. Internal Impedance at 1000Hz at charged state.		25 mΩ	
Charge	Standard	190 mA × 16 hours	
	Rapid *3	MAX 1200 mA × 1.9 hours (with control system)	
Ambient Temperature	Charge	Standard	0 to +45 °C (32 to 113 °F)
		Rapid	0 to +40 °C (32 to 104 °F)
	Discharge		-10 to +65 °C (14 to 149 °F)
	Storage	< 1 year	-20 to +35 °C (-4 to 95 °F)
< 6 months		-20 to +45 °C (-4 to 113 °F)	
< 1 month		-20 to +55 °C (-4 to 131 °F)	



*1 After charging at 0.1It for 16 hours, discharging at 0.2It.

*2 For reference only.

*3 Need specially designed control system. Please contact Panasonic for details.

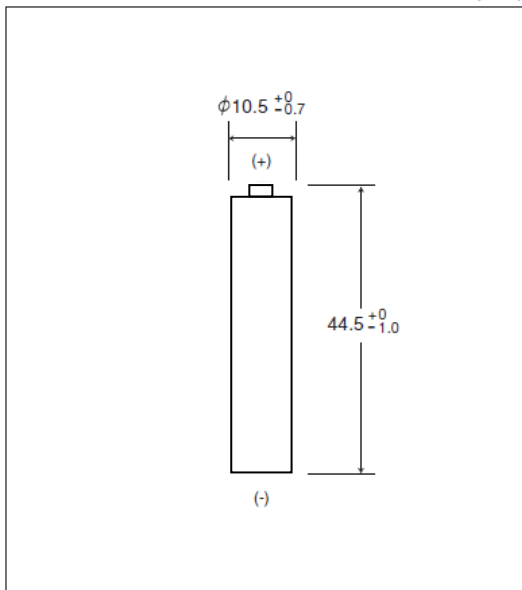
Battery performance and cycle life are strongly affected by how they are used. In order to maximize battery safety, please consult Panasonic when determining charge/discharge specs, warning label contents and unit design.

*The data in this document are for descriptive purposes only and are not intended to make or imply any guarantee or warranty.

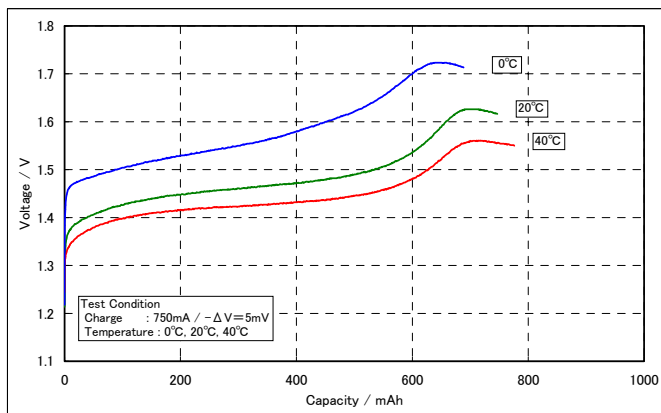
HHR-4MVE

■ Dimensions (with tube)

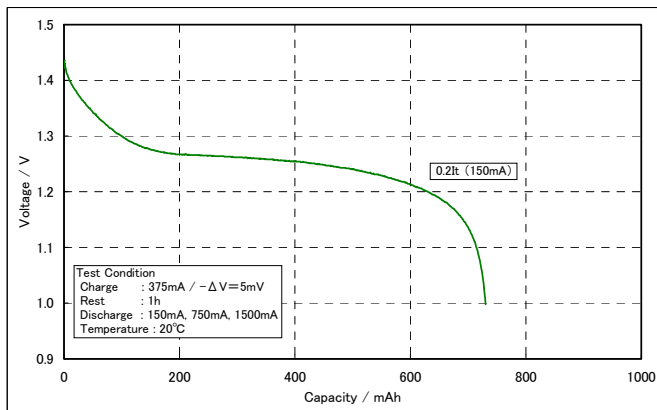
(mm)



■ Typical charge characteristics



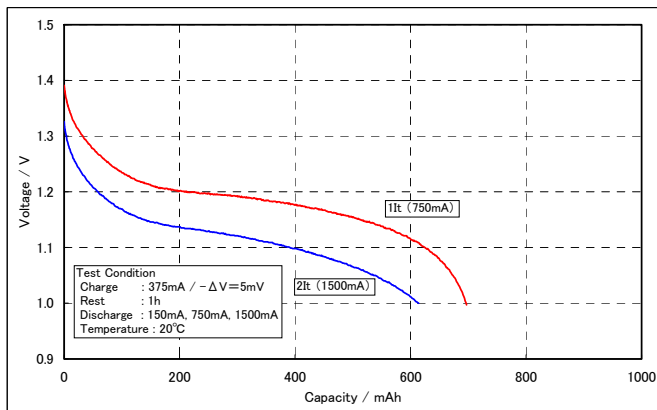
■ Typical discharge characteristics



■ Specifications

Diameter	10.5+0/-0.7	mm
Height	44.5+0/-1.0	mm
Weight	Approx. 12	g

Nominal Voltage		1.2V	
Discharge Capacity*1	Average *2	780 mAh	
	Rated (min)	750 mAh	
Approx. Internal Impedance at 1000Hz at charged state.		35 mΩ	
Charge	Standard	75 mA × 16 hours	
	Rapid *3	MAX 375 mA × 2.4 hours (with control system)	
Ambient Temperature	Charge	Standard	0 to +45 °C (32 to 113 °F)
		Rapid	0 to +40 °C (32 to 104 °F)
Discharge		-10 to +65 °C (14 to 149 °F)	
Storage	< 1 year	-20 to +35 °C (-4 to 95 °F)	
	< 6 months	-20 to +45 °C (-4 to 113 °F)	
	< 1 month	-20 to +55 °C (-4 to 131 °F)	



*1 After charging at 0.1It for 16 hours, discharging at 0.2It.

*2 For reference only.

*3 Need specially designed control system. Please contact Panasonic for details.

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