

## Radial lead Type

Series: HW

### Feature

Miniaturized, high-capacitance, low-resistance.  
Can be charged and discharged with more cycles compared to secondary batteries.  
Pollution free: Has activated carbon and organic electrolyte.  
Does not contain polyvinyl chloride and lead.  
RoHS directive compliant



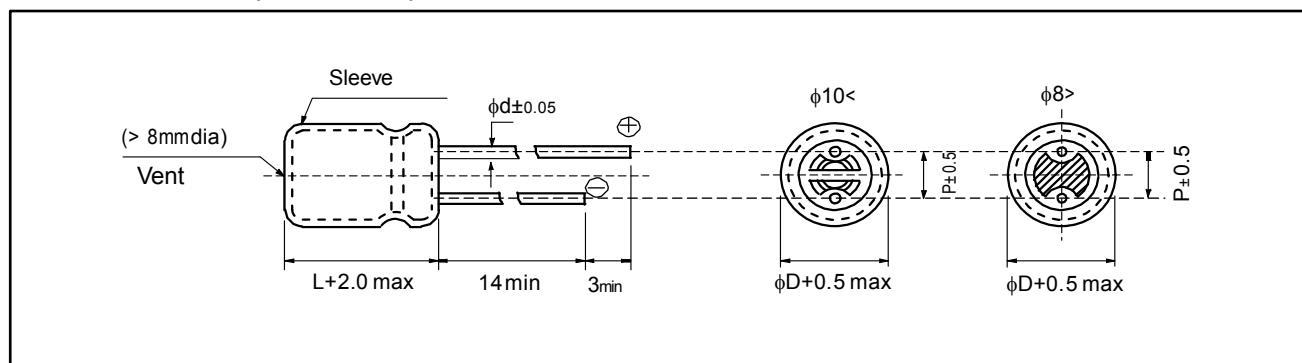
### Recommended Applications

Solar battery operated circuits (Road guidance flasher),  
Quick charging motor drives (Toy car)  
Back-up Power Supplies (UPS)

### Specifications

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Category temp. range	-25 to +70°C		-25 to +60°C	
Maximum Operating Voltage	2.3 V .DC		2.3 V .DC	2.1V .DC
Nominal Cap. Range	1 to 22 F		30, 50 F	70F
Capacitance Tolerance	-20 to +40%			
Characteristics at Low Temperature	Capacitance change	±30% of initial measured value at +20°C (-25 to +70°C, +60°C)		
	Internal resistance	< 4 times of initial measured value at +20°C (at -25°C)		
Endurance	After 1000 hours application of 2.3V. DC at +70°C(+60°C), the capacitor shall meet the following limits.			
	Capacitance change	±30% of initial measured value		
	Internal resistance	< 2 time of initial specified value		
Shelf Life	After 1000 hours storage at +70°C(+60°C) without load, the capacitor shall meet the specified limits for Endurance.			
Moisture Resistance	After 500 hours storage at +55°C, 90 to 95% R.H., the capacitor shall meet the specified limits for Endurance.			

### Dimensions in mm (not to scale)



### Standard Products

Category temp. range (°C)	Max. Operating Voltage (V.DC)	Capacitance (F)	Internal resistance (&) at 1kHz	Size(mm)				Part number	Min. Packaging Q'ty (pcs)
				∅D	L	∅d	P		
-25 to +70	2.3	1.0	< 1.0	8.0	22.0	0.7	3.5	EECHW0D105	200
		3.3	< 0.3	12.5	23.0	0.8	5.0	EECHW0D335	200
		4.7	< 0.3	12.5	23.0	0.8	5.0	EECHW0D475	200
		10	< 0.2	12.5	35.0	0.8	5.0	EECHW0D106	100
		22	< 0.1	18.0	35.0	0.8	7.5	EECHW0D226	50
-25 to +60	2.1	30	< 0.1	18.0	35.0	0.8	7.5	EECHW0D306	50
		50	< 0.1	18.0	40.0	0.8	7.5	EECHW0D506	50
		70	< 0.1	18.0	50.0	0.8	7.5	EECHW0D706	50

Note:1. Do not use reflow soldering. (IR, Atmosphere heating methods, etc.).