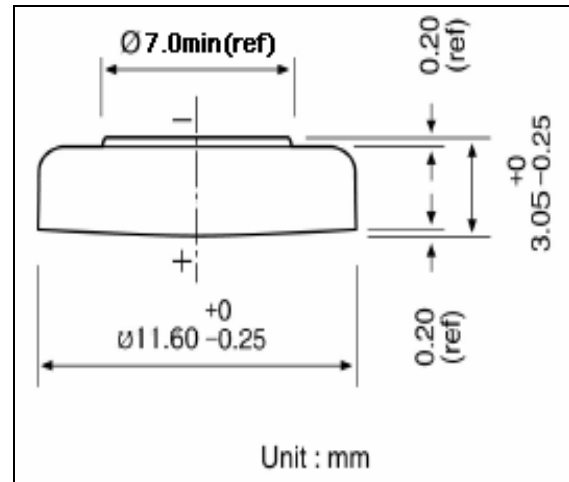


**Type** : Mercury and Lead Free Button Cell  
**Chemical System** : Zinc/Manganese Dioxide  
**Nominal Voltage** : 1.5Volts  
**Nominal Dimensions** :  $\varnothing 11.6\text{mm} \times 3.05\text{mm}$   
**Application** : Watch (with alarm), calculator, electronic toys, melody card, ... etc.  
**Average Weight** : 1.0g  
**Date Code** : Unless otherwise specified, each cell Will carry a numeric year code and an alphabetical month code.  
**Shelf Life** : 12 months shelf life after delivery .  
**Close Circuit Voltage** : 1.30Volts (min.)( load resistor  $300\Omega$  at  $20 \pm 2^\circ\text{C}$  for 0.1 to 2 seconds)  
**Nominal Service Life** : 130 hrs (load  $3.9\text{k}\Omega$  to cut off 1.0V under  $20 \pm 2^\circ\text{C}$ )  
**Average Service Capacity** : 44mAh (load  $3.9\text{k}\Omega$  to cut off 1.0V under  $20 \pm 2^\circ\text{C}$ )

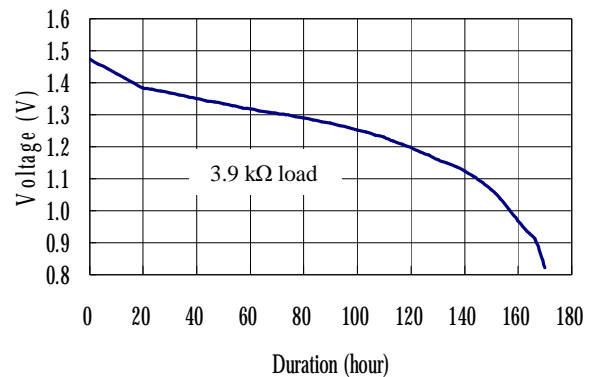
**Cross References:**

IEC	Maxell	Duracell	Others
LR54	JR1130	LR54	V10GA, AG10

Model No.: **GP189F**



Typical discharge curve when 3.9kohm load



Typical Discharge characteristics at  $20 \pm 2^\circ\text{C}$

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