

Part Number: **LR14XWA**

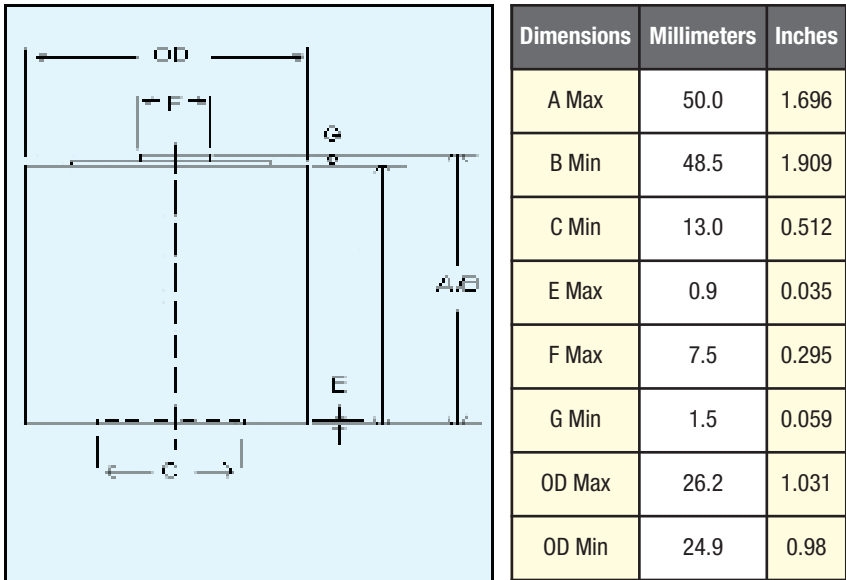
(Replaces Panasonic part number AM-2PI)

Alkaline-Zinc/Manganese Dioxide



Industry Standard Dimensions mm (inches)

Dimensions Comply with ANSI and IEC Standards



Specifications

Chemical System:	Alkaline-Zinc/Manganese Dioxide (Zn/MnO2)
Designation:	ANSI-14A, IEC-LR14
Nominal Voltage:	1.5V
Operating Temperature Range:	-20°C to 54°C (-4°F to 130°F)
Typical Weight:	70 grams (2.47 oz.)
Typical Volume:	26.9 cm <sup>3</sup> (1.6 in. <sup>3</sup> )
Terminals:	Flat (Recessed Negative)
Shelf Life:	7 years (80% Capacity)
Heavy Metals Content:	No added Mercury, Cadmium or Lead

Batteries for every application and industry including:

- Medical
  - Communications
  - Contractors
  - Manufacturing
- Hotel/Motel/Restaurant
  - Government/Municipality
  - Janitorial/Sanitation
  - Military/Defense
- Transportation
  - HVAC
  - Power Plants
  - Security

**Important Notice:** This data sheet contains typical information specific to products manufactured at the time of its publication.

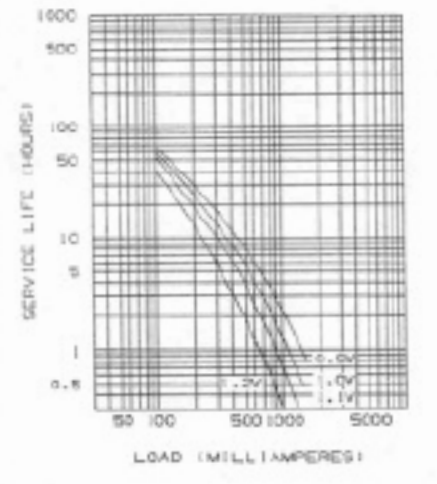


Photos represent typical industrial applications but may or may not match the battery size on this data sheet.

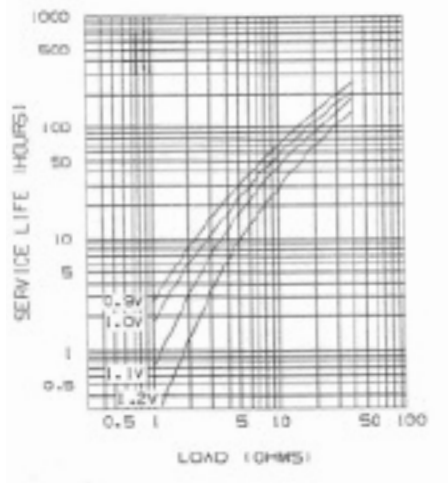
**Part Number: LR14XWA** (Replaces Panasonic part number AM-2PI)

## Alkaline-Zinc/Manganese Dioxide

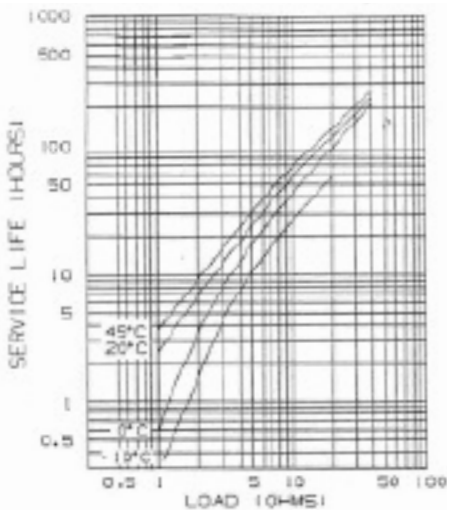
**Typical Discharge Characteristics with Constant Current at 20°C**



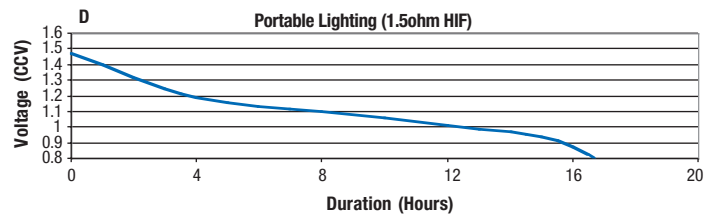
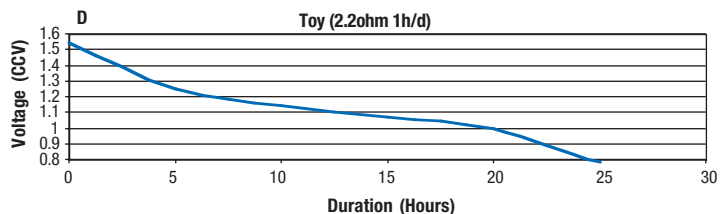
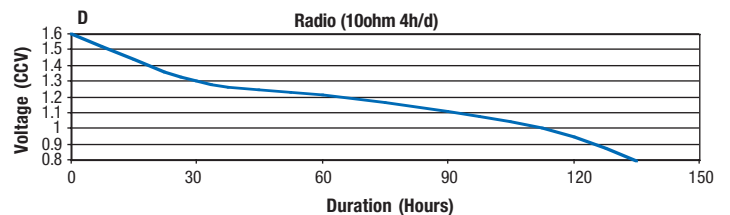
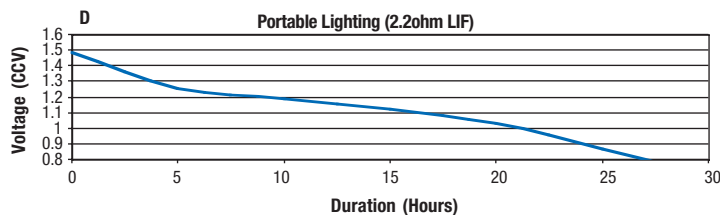
**Typical Discharge Characteristics with Constant Resistance at 20°C**



**Typical Temperature Characteristics 0.9 Volts Cutoff Voltage**



### IEC/ANSI Standard Tests @ 20°C



This information is generally typical and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specifications are subject to modification without notice. Cell/battery performance and service life depends on the operating temperature, cut-off voltage and load applied to cell/battery in a specific application. It is the responsibility of each user to ensure that each cell/battery application is adequately designed safe and compatible with all conditions encountered during use and in conformance with existing standards and requirements. Contact Panasonic for the latest information.

©2009 Panasonic Energy Corporation of America. All rights reserved. All reproductions prohibited without proper authorization. Characteristics and specifications subject to change without prior notification.

**Panasonic**  
ideas for life

Part Number: **LR03XWA**

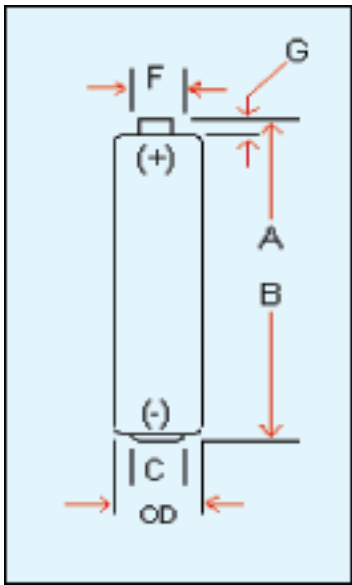
(Replaces Panasonic part number AM-4PI)

Alkaline-Zinc/Manganese Dioxide



Industry Standard Dimensions mm (inches)

Dimensions Comply with ANSI and IEC Standards



Dimensions	Millimeters	Inches
A Max	44.5	1.752
B Min	43.5	1.713
C Min	4.3	0.169
F Max	3.8	0.150
G Min	0.8	0.031
OD Max	10.5	0.413
OD Min	9.5	0.374

Specifications

Chemical System:	Alkaline-Zinc/Manganese Dioxide (Zn/MnO2)
Designation:	ANSI-24A, IEC-LR03
Nominal Voltage:	1.5V
Operating Temperature Range:	-20°C to 54°C (-4°F to 130°F)
Typical Weight:	11.0 grams (0.38 oz.)
Typical Volume:	3.8 cm <sup>3</sup> (0.2 in. <sup>3</sup> )
Terminals:	Cap and base
Shelf Life:	7 years (80% Capacity)
Heavy Metals Content:	No added Mercury, Cadmium or Lead

Batteries for every application and industry including:

- Medical
  - Communications
  - Contractors
  - Manufacturing
- Hotel/Motel/Restaurant
  - Government/Municipality
  - Janitorial/Sanitation
  - Military/Defense
- Transportation
  - HVAC
  - Power Plants
  - Security

Important Notice: This data sheet contains typical information specific to products manufactured at the time of its publication.

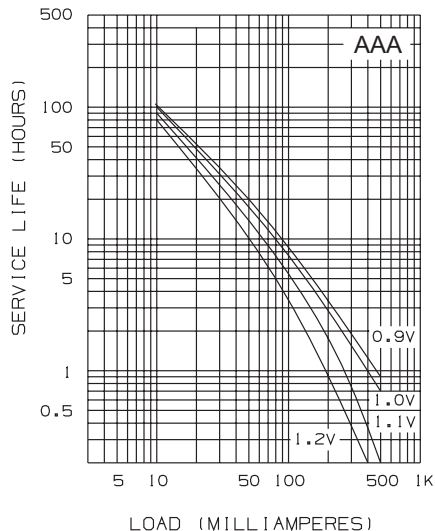


Photos represent typical industrial applications but may or may not match the battery size on this data sheet.

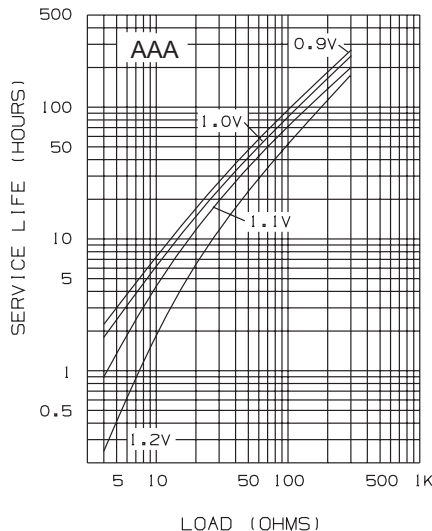
**Part Number: LR03XWA** (Replaces Panasonic part number AM-4PI)

## Alkaline-Zinc/Manganese Dioxide

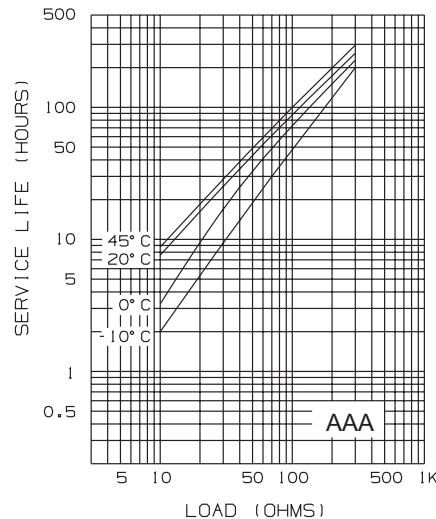
**Typical Discharge Characteristics with Constant Current at 20°C**



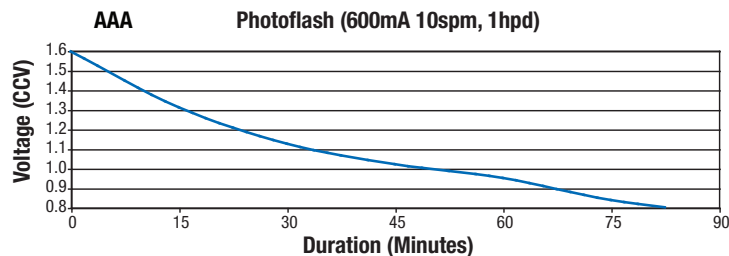
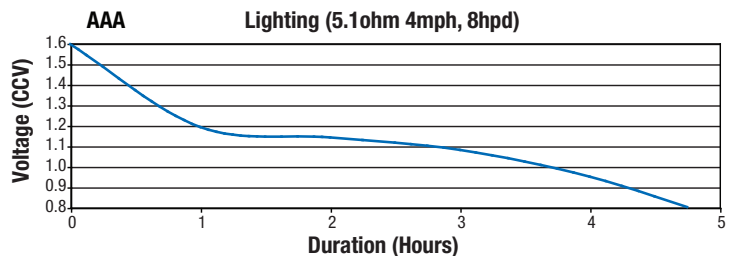
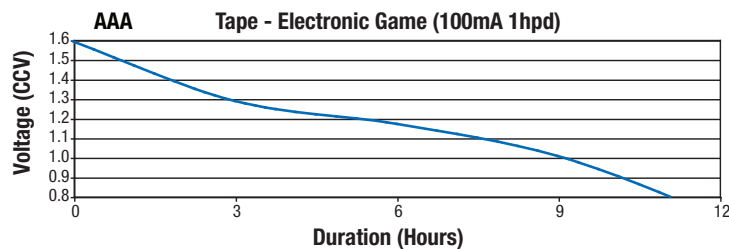
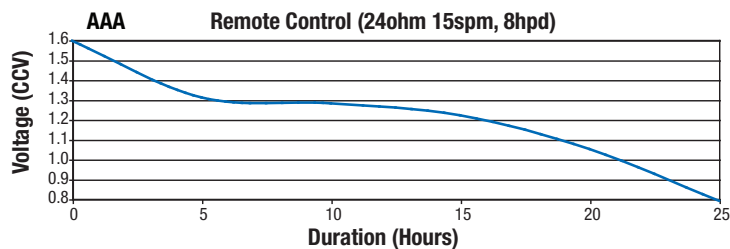
**Typical Discharge Characteristics with Constant Resistance at 20°C**



**Typical Temperature Characteristics 0.9 Volts Cutoff Voltage**



### IEC/ANSI Standard Tests @ 20°C



This information is generally typical and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specifications are subject to modification without notice. Cell/battery performance and service life depends on the operating temperature, cut-off voltage and load applied to cell/battery in a specific application. It is the responsibility of each user to ensure that each cell/battery application is adequately designed safe and compatible with all conditions encountered during use and in conformance with existing standards and requirements. Contact Panasonic for the latest information.

©2009 Panasonic Energy Corporation of America. All rights reserved. All reproductions prohibited without proper authorization. Characteristics and specifications subject to change without prior notification.

# Panasonic

## ideas for life

Part Number: **LR20XWA**

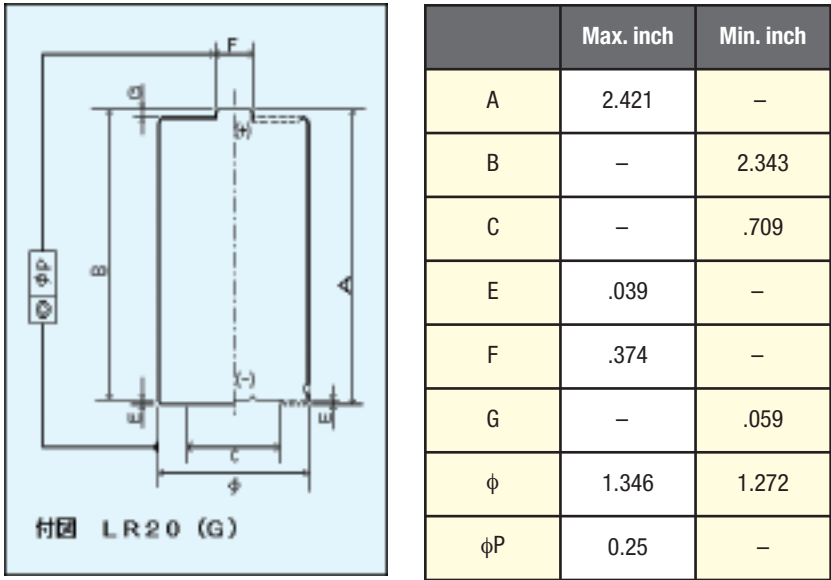
(Replaces Panasonic part number AM-1PI)

Alkaline-Zinc/Manganese Dioxide



Industry Standard Dimensions mm (inches)

Dimensions Comply with ANSI and IEC Standards



Specifications

Chemical System:	Alkaline-Zinc/Manganese Dioxide (Zn/MnO2)
Designation:	ANSI-13A, IEC-LR20
Nominal Voltage:	1.5V
Operating Temperature Range:	-20°C to 54°C (-4°F to 130°F)
Typical Weight:	141 grams (4.97 oz.)
Typical Volume:	55.9 cm <sup>3</sup> (3.4 in. <sup>3</sup> )
Terminals:	Flat (Recessed Negative)
Shelf Life:	7 years (80% Capacity)
Heavy Metals Content:	No added Mercury, Cadmium or Lead

Batteries for every application and industry including:

- Medical
  - Communications
  - Contractors
  - Manufacturing
- Hotel/Motel/Restaurant
  - Government/Municipality
  - Janitorial/Sanitation
  - Military/Defense
- Transportation
  - HVAC
  - Power Plants
  - Security

**Important Notice:** This data sheet contains typical information specific to products manufactured at the time of its publication.

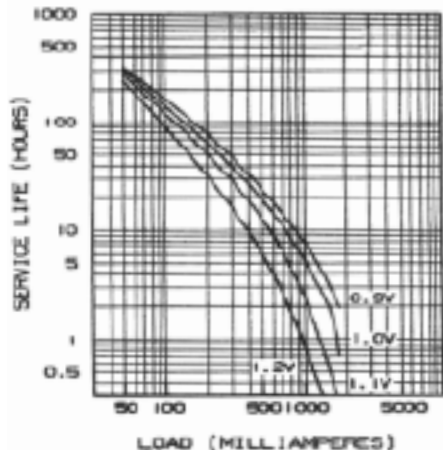


Photos represent typical industrial applications but may or may not match the battery size on this data sheet.

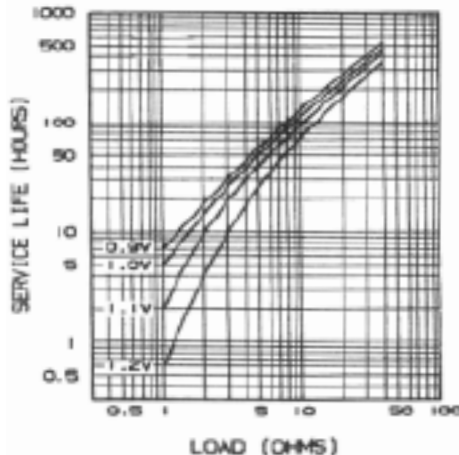
**Part Number: LR20XWA** (Replaces Panasonic part number AM-1PI)

## Alkaline-Zinc/Manganese Dioxide

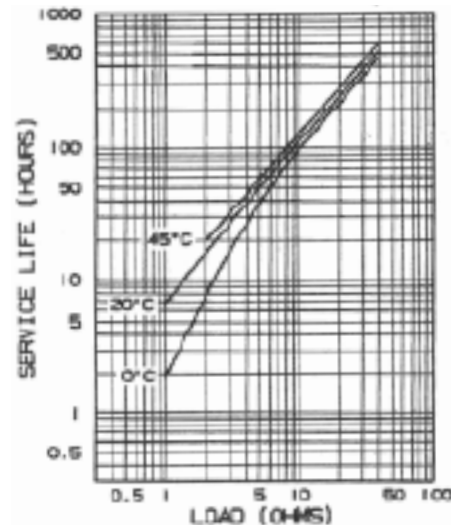
**Typical Discharge Characteristics with Constant Current at 20°C**



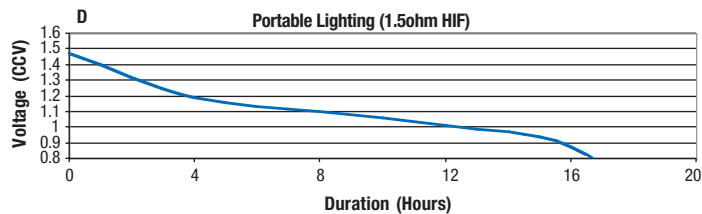
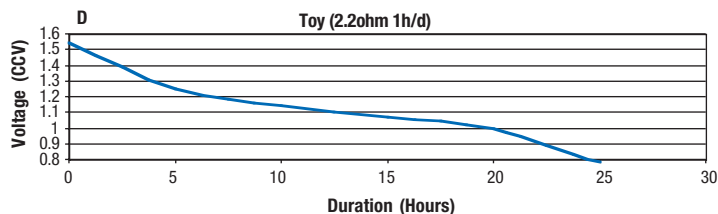
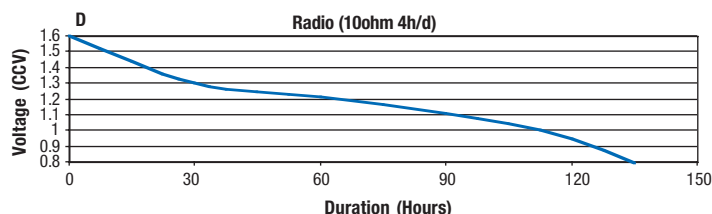
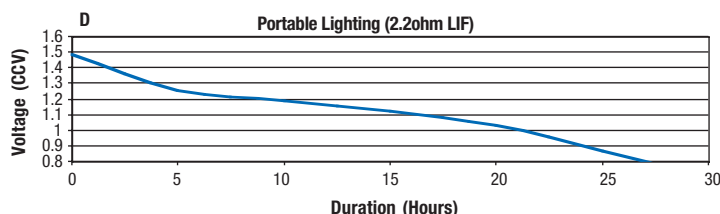
**Typical Discharge Characteristics with Constant Resistance at 20°C**



**Typical Temperature Characteristics 0.9 Volts Cutoff Voltage**



### IEC/ANSI Standard Tests @ 20°C



This information is generally typical and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specifications are subject to modification without notice. Cell/battery performance and service life depends on the operating temperature, cut-off voltage and load applied to cell/battery in a specific application. It is the responsibility of each user to ensure that each cell/battery application is adequately designed safe and compatible with all conditions encountered during use and in conformance with existing standards and requirements. Contact Panasonic for the latest information.

©2009 Panasonic Energy Corporation of America. All rights reserved. All reproductions prohibited without proper authorization. Characteristics and specifications subject to change without prior notification.

**Panasonic**  
ideas for life



Part Number:

LR6XWA

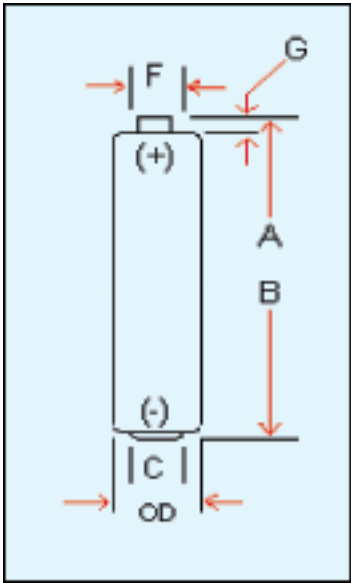
(Replaces Panasonic part number AM-3PI)

Alkaline-Zinc/Manganese Dioxide



Industry Standard Dimensions mm (inches)

Dimensions Comply with ANSI and IEC Standards



Dimensions	Millimeters	Inches
A Max	50.5	1.988
B Min	49.5	1.949
C Min	7.0	0.276
F Max	5.5	0.217
G Min	1.0	0.039
OD Max	14.5	0.571
OD Min	13.5	0.531

Specifications

Chemical System:	Alkaline-Zinc/Manganese Dioxide (Zn/MnO <sub>2</sub> )
Designation:	ANSI-15A, IEC-LR6
Nominal Voltage:	1.5V
Operating Temperature Range:	-20°C to 54°C (-4°F to 130°F)
Typical Weight:	23 grams (0.8 oz.)
Typical Volume:	8.1 cm <sup>3</sup> (0.5 in. <sup>3</sup> )
Terminals:	Cap and base
Shelf Life:	7 years (80% Capacity)
Heavy Metals Content:	No added Mercury, Cadmium or Lead

Batteries for every application and industry including:

- Medical
  - Communications
  - Contractors
  - Manufacturing
- Hotel/Motel/Restaurant
  - Government/Municipality
  - Janitorial/Sanitation
  - Military/Defense
- Transportation
  - HVAC
  - Power Plants
  - Security

**Important Notice:** This data sheet contains typical information specific to products manufactured at the time of its publication.

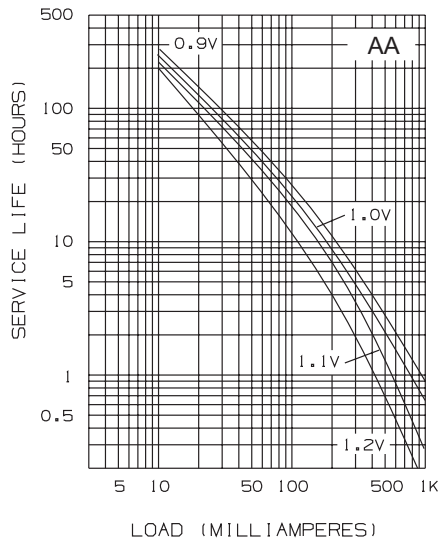


Photos represent typical industrial applications but may or may not match the battery size on this data sheet.

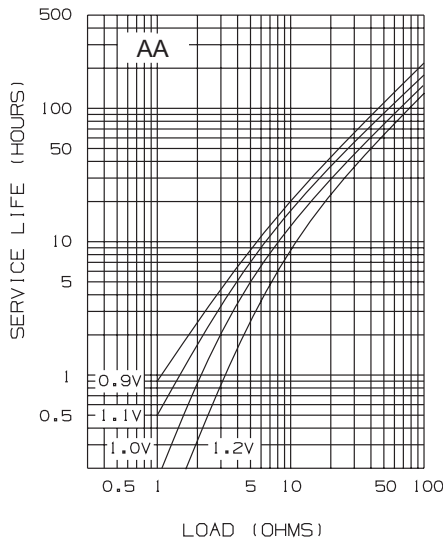
**Part Number: LR6XWA** (Replaces Panasonic part number AM-3PI)

## Alkaline-Zinc/Manganese Dioxide

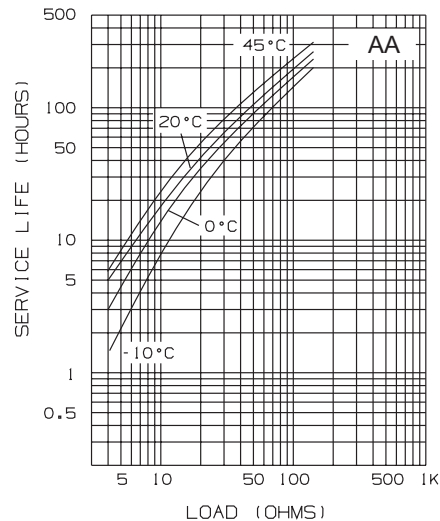
**Typical Discharge Characteristics with Constant Current at 20°C**



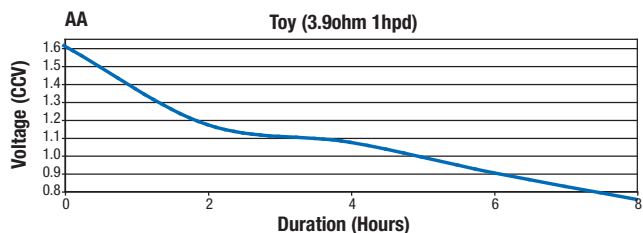
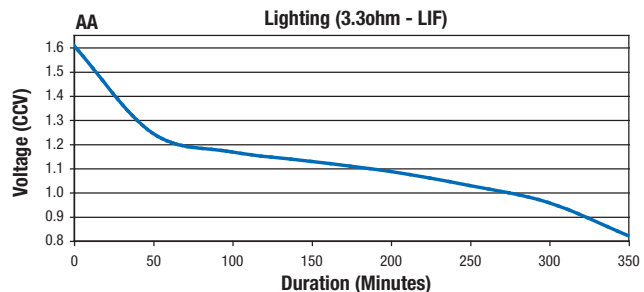
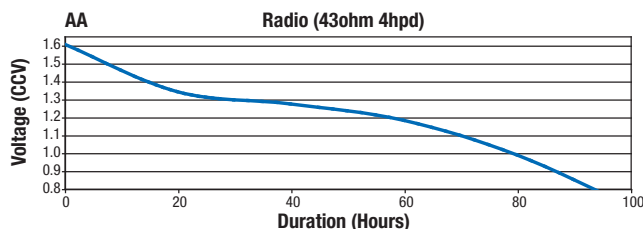
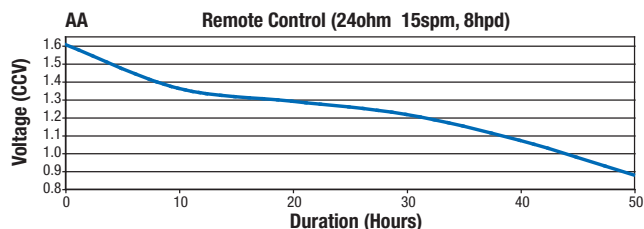
**Typical Discharge Characteristics with Constant Resistance at 20°C**



**Typical Temperature Characteristics 0.9 Volts Cutoff Voltage**



### IEC/ANSI Standard Tests @ 20°C



This information is generally typical and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specifications are subject to modification without notice. Cell/battery performance and service life depends on the operating temperature, cut-off voltage and load applied to cell/battery in a specific application. It is the responsibility of each user to ensure that each cell/battery application is adequately designed safe and compatible with all conditions encountered during use and in conformance with existing standards and requirements. Contact Panasonic for the latest information.

©2009 Panasonic Energy Corporation of America. All rights reserved. All reproductions prohibited without proper authorization. Characteristics and specifications subject to change without prior notification.

# Panasonic

## ideas for life