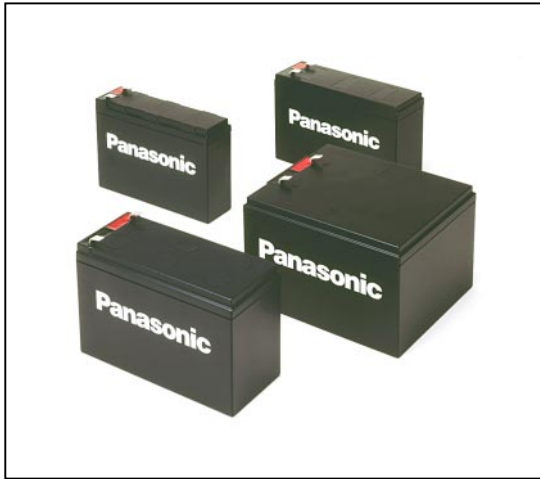


High Power Series



Features

- These high-power trickle use batteries offer a slimmer design and energy density up to 30% higher than conventional sealed lead acid batteries.
- Ideal for use as backup batteries in UPS.
- Slim Design to reduce UPS volume.
- Mono-Block 24V battery (UP-RW2447) for reduced connections and convenience.

Applications

- UPS
- PBX
- Back-Up Equipment

NEW!

Specifications

| | Length (mm) | Width (mm) | Height (mm) | | Approx. Weight (kg) | Terminal Types | Case Resin ¹ |
|----------------|--------------------|-------------------|---------------|-------------------|---------------------|--------------------------------|-------------------------|
| | | | w/ Terminal | w/o Terminal | | | |
| UP-RW1220P(a) | 140 + 1.5 / -0.5 | 38.5 + 1.5 / -0.5 | Max. 100 | 94 + 1.5 / -0.5 | 1.35 | Faston 250 or Faston 187 | HB or V-0 |
| UP-RW1232P(a)* | 149.5 + 1.5 / -0.5 | 49.5 + 1.5 / -0.5 | | 92.5 + 1.5 / -0.5 | 2.0 | | |
| UP-RW1245P(a) | 151 + 1.5 / -0.5 | 64.5 + 1.5 / -0.5 | Approx. 101.5 | 94 + 1.5 / -0.5 | 2.6 | | |
| UP-RW2447P(a) | 151 + 1.5 / -0.5 | 129 + 1.5 / -0.5 | | | 5.1 | | |

1. These products adopt UL94HB-compliant resin as the standard material of the battery case. The product color is black. Optionally, flame-retardant resin complying with UL94V-0 is also available. The product color is gray and the model number is changed to UP-VW.

* Please consult Panasonic for the latest availability information on this item.

Watt Table

Discharge rate at 77°F (25°C)

| | Cutoff V/cell | 3 min. | 5 min. | 7 min. | 10 min. | 15 min. | 20 min. | 30 min. |
|---------------|---------------|--------|--------|--------|---------|---------|---------|---------|
| UP-RW1220P(a) | 1.60 | 237 | 180 | 150 | 120 | 91 | 75 | 57 |
| | 1.70 | 217 | 167 | 135 | 113 | 87 | 73 | 52 |
| | 1.80 | 177 | 137 | 115 | 102 | 82 | 66 | 47 |
| UP-RW1232P(a) | 1.60 | 372 | 295 | 242 | 192 | 152 | 123 | 93 |
| | 1.70 | 328 | 266 | 211 | 182 | 137 | 115 | 89 |
| | 1.80 | 279 | 218 | 180 | 164 | 123 | 104 | 81 |
| UP-RW1245P(a) | 1.60 | 530 | 410 | 330 | 268 | 195 | 159 | 112 |
| | 1.70 | 490 | 390 | 315 | 258 | 193 | 156 | 111 |
| | 1.80 | 434 | 330 | 274 | 234 | 180 | 146 | 109 |
| UP-RW2447P(a) | 1.60 | 1100 | 850 | 685 | 564 | 405 | 325 | 235 |
| | 1.70 | 1000 | 800 | 651 | 543 | 390 | 312 | 222 |
| | 1.80 | 820 | 665 | 562 | 483 | 360 | 292 | 218 |

Note: The above characteristics data are average values obtained within three charge/discharge cycles. The above data are average values, not guaranteed.

Trickle Life: Expected design life at 0.25CA discharge is 3-5 years at 25°C

Shelf Life: Self discharge ratio is about 3% at 25°C per month

This literature contains information concerning cells and batteries manufactured by Matsushita Battery Industrial Corporation of America. This information is generally descriptive only and is not intended to make or imply any representation guarantee or warranty with respect to any cells and batteries. Cell and battery designs are subject to modification without notice. Contact Panasonic for safety precautions and the latest specifications before purchase and/or use. © Copyright 1999 Matsushita Battery Industrial Corporation of America. All rights reserved.

INDIVIDUAL SPECIFICATIONS

UP-RW1220P(a)



(a) Add applicable code for terminal type, special configurations, etc.

Specifications

| | | |
|-------------------------|----------------------------------|----------------------|
| Nominal voltage | 12V | |
| Nominal capacity | 20 W/cell @ 10MR (4.2Ah @ 20HR)* | |
| Dimensions inch (mm) | Total height | 3.937 inch (100 mm) |
| | Height | 3.701 inch (94 mm) |
| | Length | 5.512 inch (140 mm) |
| | Width | 1.516 inch (38.5 mm) |
| Approx. Mass | 2.98 lbs. (1.35 kg) | |
| Country of Origin | Mexico | |
| Terminal Types | P: Faston 187 | |
| | P1: Faston 250 | |

Characteristics

| | | | |
|---|--|-----------------|--|
| Capacity at 77°F (25°C) (1.6V/cell cutoff) | 30 minute rate | 60 W | |
| | 15 minute rate | 95 W | |
| | 10 minute rate | 120 W | |
| | 5 minute rate | 190 W | |
| Internal resistance 77°F (25°C) | Fully charged battery | Approx. 55mΩ | |
| Temperature dependency of capacity (10 hour rate) | 104°F (40°C) | 102 % | |
| | 77°F (25°C) | 100 % | |
| | 32°F (0°C) | 85 % | |
| | 5°F (-15°C) | 65 % | |
| Self discharge at 77°F (25°C) | Residual capacity after standing 3 months | 91% | |
| | Residual capacity after standing 6 months | 82% | |
| | Residual capacity after standing 12 months | 65% | |
| Charge Method (Current limited Constant Voltage) | Trickle use | Control voltage | 13.6 to 13.8 V (per 12V cell at 77°F (25°C)) |

Watt Table

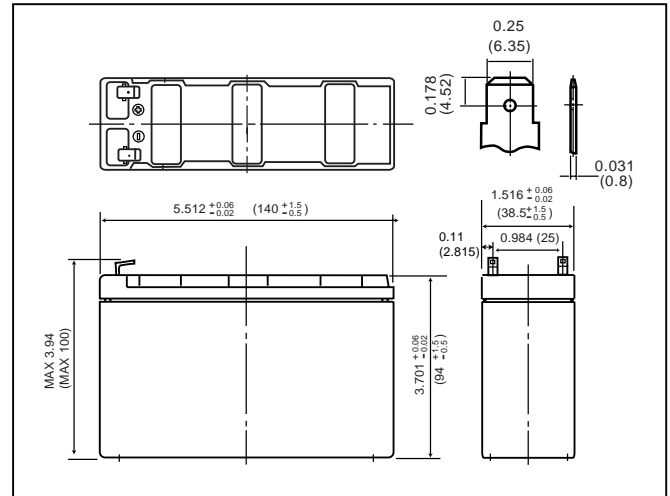
| Cutoff V/cell | Discharge Runtime at 77°F (25°C) | | | | | | |
|---------------|----------------------------------|--------|--------|---------|---------|---------|---------|
| | 3 min. | 5 min. | 7 min. | 10 min. | 15 min. | 20 min. | 30 min. |
| 1.60 | 237 | 180 | 150 | 120 | 91 | 75 | 57 |
| 1.70 | 217 | 167 | 135 | 113 | 87 | 73 | 52 |
| 1.80 | 177 | 137 | 115 | 102 | 82 | 66 | 47 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

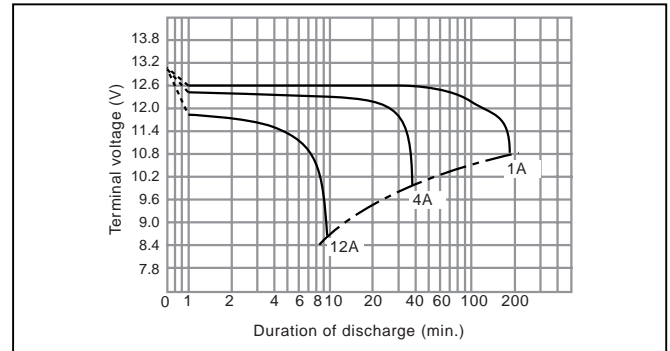
*This battery is designed for high rate discharge and the 20 hour rate discharge capacity is for reference only. For cycle use of the battery, please contact Panasonic in advance.

* This product adopts UL94HB-compliant resin as the material of the battery case. Product color is black. Optionally, type UP-VW1220 which adopts flame-retardant resin complying with UL94V-0 is also available. Product color is gray.

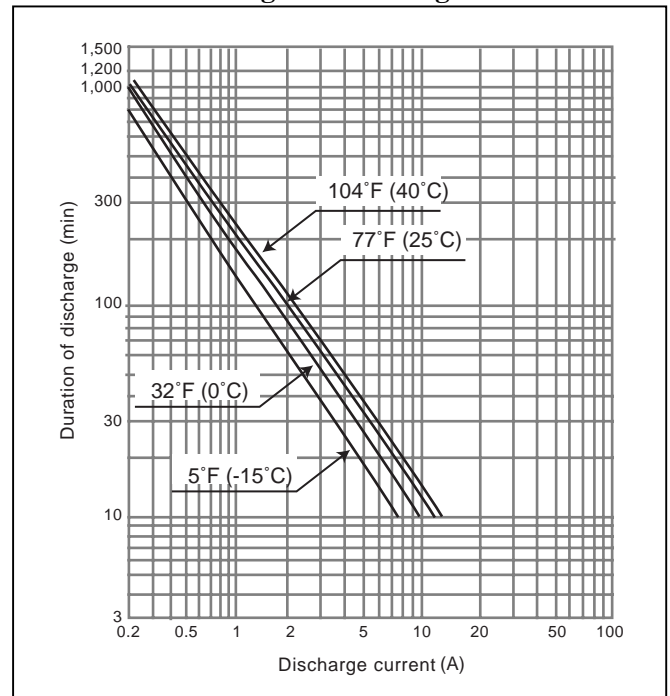
Dimensions inch (mm)



Discharge characteristics (77°F (25°C)) (note)



Duration of discharge vs. Discharge current



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Web: www.panasonic.com/batteries

INDIVIDUAL SPECIFICATIONS

UP-RW1232P(a)



(a) Add applicable code for terminal type, special configurations, etc.

Specifications

| | | |
|-------------------------|--------------------------------|-----------------------|
| Nominal voltage | 12V | |
| Nominal capacity | 32 W/cell @ 10MR (7Ah @ 20HR)* | |
| Dimensions inch (mm) | Total height | 3.937 inch (100 mm) |
| | Height | 3.642 inch (92.5 mm) |
| | Length | 5.886 inch (149.5 mm) |
| | Width | 1.949 inch (49.5 mm) |
| Approx. Mass | 4.41 lbs. (2.0 kg) | |
| Country of Origin | Mexico | |
| Terminal Types | P: Faston 187 | |
| | P1: Faston 250 | |

Characteristics

| | | |
|---|--|--|
| Capacity at 77°F (25°C) (1.6V/cell cutoff) | 30 minute rate | 93 W |
| | 15 minute rate | 152 W |
| | 10 minute rate | 192 W |
| | 5 minute rate | 295 W |
| Internal resistance 77°F (25°C) | Fully charged battery | Approx. 40mΩ |
| Temperature dependency of capacity (10 hour rate) | 104°F (40°C) | 102 % |
| | 77°F (25°C) | 100 % |
| | 32°F (0°C) | 85 % |
| | 5°F (-15°C) | 65 % |
| Self discharge at 77°F (25°C) | Residual capacity after standing 3 months | 91% |
| | Residual capacity after standing 6 months | 82% |
| | Residual capacity after standing 12 months | 65% |
| Charge Method (Current limited Constant Voltage) | Trickle use | Control voltage |
| | | 13.6 to 13.8 V (per 12V cell at 77°F (25°C)) |

Watt Table

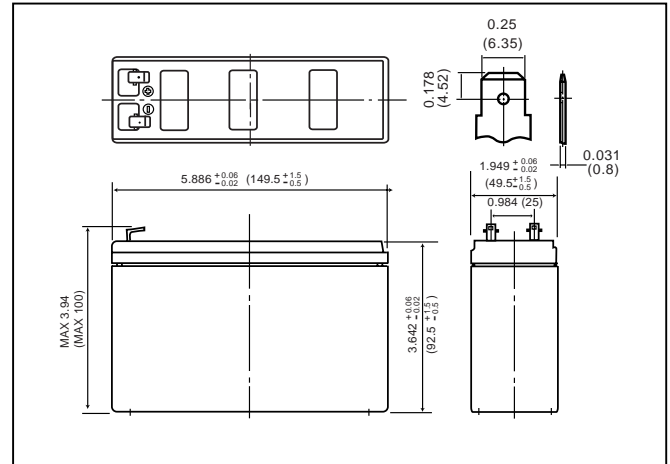
| Cutoff V/cell | Discharge Runtime at 77°F (25°C) | | | | | | |
|---------------|----------------------------------|--------|--------|---------|---------|---------|---------|
| | 3 min. | 5 min. | 7 min. | 10 min. | 15 min. | 20 min. | 30 min. |
| 1.60 | 372 | 295 | 242 | 192 | 152 | 123 | 93 |
| 1.70 | 328 | 266 | 211 | 182 | 137 | 115 | 89 |
| 1.80 | 279 | 218 | 180 | 164 | 123 | 104 | 81 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

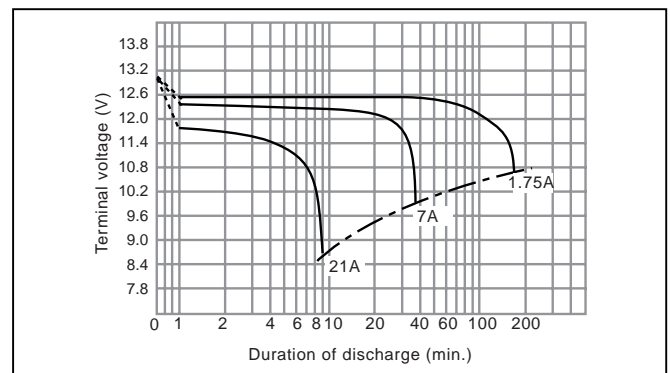
*This battery is designed for high rate discharge and the 20 hour rate discharge capacity is for reference only. For cycle use of the battery, please contact Panasonic in advance.

* This product adopts UL94HB-compliant resin as the material of the battery case. Product color is black. Optionally, type UP-VW1232 which adopts flame-retardant resin complying with UL94V-0 is also available. Product color is gray.

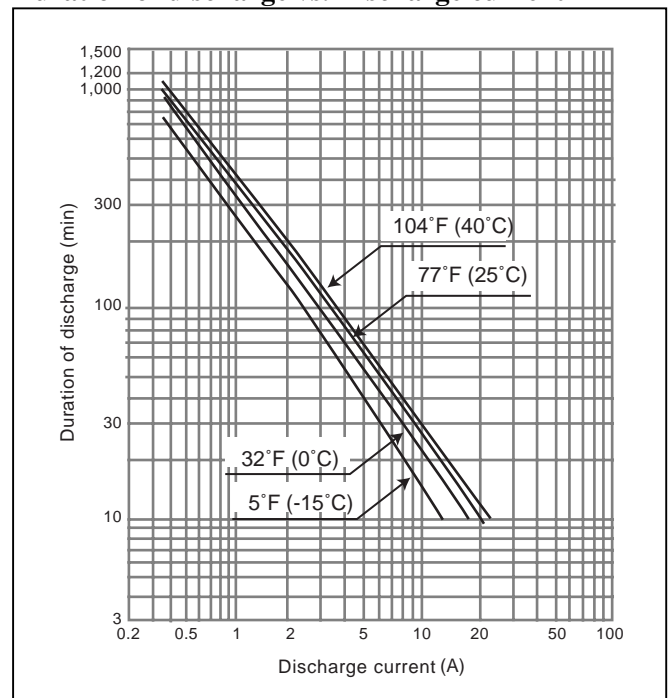
Dimensions inch (mm)



Discharge characteristics (77°F (25°C)) (note)



Duration of discharge vs. Discharge current



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INDIVIDUAL SPECIFICATIONS

UP-RW1245P(a)



(a) Add applicable code for terminal type, special configurations, etc.

Specifications

| | | |
|-------------------------|--------------------------------|-----------------------|
| Nominal voltage | 12V | |
| Nominal capacity | 45 W/cell @ 10MR (9Ah @ 20HR)* | |
| Dimensions inch (mm) | Total height | 3.996 inch (101.5 mm) |
| | Height | 3.701 inch (94 mm) |
| | Length | 5.945 inch (151 mm) |
| | Width | 2.539 inch (64.5 mm) |
| Approx. Mass | 5.75 lbs. (2.60 kg) | |
| Country of Origin | Mexico | |
| Terminal Types | P: Faston 187 | |
| | P1: Faston 250 | |

Characteristics

| | | |
|--|---|--|
| Capacity at 77°F (25°C) (1.6V/cell cutoff) | 30 minute rate | 112 W |
| | 15 minute rate | 200 W |
| | 10 minute rate | 268 W |
| | 5 minute rate | 410 W |
| Internal resistance 77°F 25°C | Fully charged battery | Approx. 30mΩ |
| Temperature dependency of capacity (10 hour rate) | 104°F (40°C) | 102 % |
| | 77°F (25°C) | 100 % |
| | 32°F (0°C) | 85 % |
| | 5°F (-15°C) | 65 % |
| Self discharge at 77°F 25°C | Residual capacity after standing 3 months | 91% |
| | Residual capacity after standing 6 months | 82% |
| | Residual capacity after standing 12 months | 65% |
| Charge Method (Current limited Constant Voltage) | Trickle use | Control voltage |
| | | 13.6 to 13.8 V (per 12V cell at 77°F (25°C)) |

Watt Table

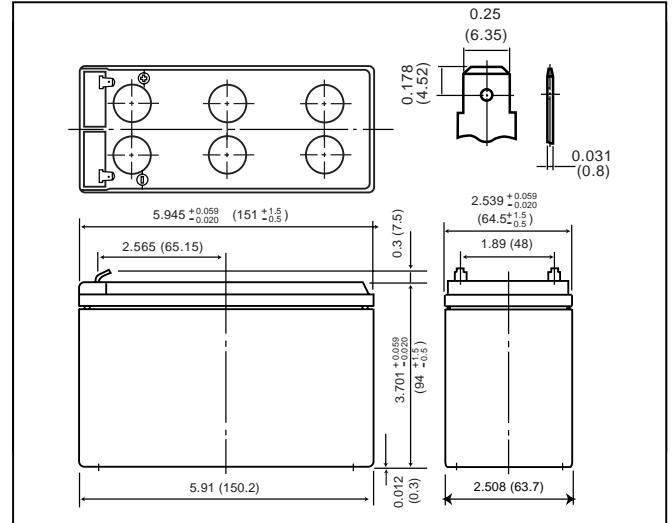
| Cutoff V/cell | Discharge Runtime at 77°F (25°C) | | | | | | |
|------------------|----------------------------------|--------|--------|---------|---------|---------|---------|
| | 3 min. | 5 min. | 7 min. | 10 min. | 15 min. | 20 min. | 30 min. |
| 1.60 | 530 | 410 | 330 | 268 | 195 | 159 | 112 |
| 1.70 | 490 | 390 | 315 | 258 | 193 | 156 | 111 |
| 1.80 | 434 | 330 | 274 | 234 | 180 | 146 | 109 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

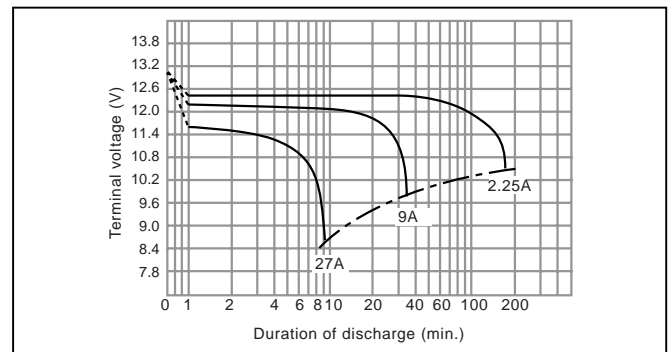
*This battery is designed for high rate discharge and the 20 hour rate discharge capacity is for reference only. For cycle use of the battery, please contact Panasonic in advance.

* This product adopts UL94HB-compliant resin as the material of the battery case. Product color is black. Optionally, type UP-VW1245 which adopts flame-retardant resin complying with UL94V-0 is also available. Product color is gray.

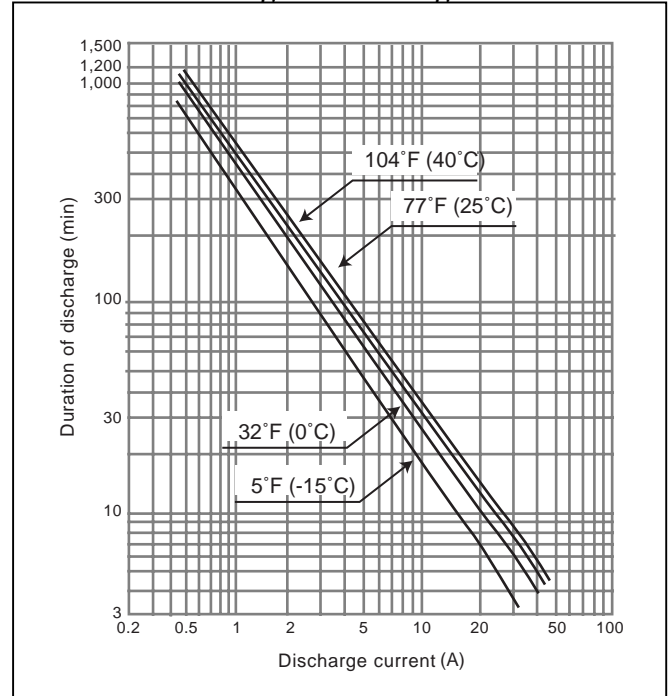
Dimensions inch (mm)



Discharge characteristics (77°F (25°C)) (note)



Duration of discharge vs. Discharge current



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INDIVIDUAL SPECIFICATIONS

UP-RW2447P(a)



(a) Add applicable code for terminal type, special configurations, etc.

Specifications

| | | |
|-------------------------|--------------------------------|-----------------------|
| Nominal voltage | 24V | |
| Nominal capacity | 47 W/cell @ 10MR (9Ah @ 20HR)* | |
| Dimensions inch (mm) | Total height | 3.996 inch (101.5 mm) |
| | Height | 3.701 inch (94 mm) |
| | Length | 5.945 inch (151.5 mm) |
| | Width | 5.079 inch (129 mm) |
| Approx. Mass | 11.3 lbs. (5.1 kg) | |
| Country of Origin | Mexico | |
| Terminal Types | P: Faston 187 | |
| | P1: Faston 250 | |

Characteristics

| | | |
|---|--|--|
| Capacity at 77°F (25°C) (1.6V/cell cutoff) | 30 minute rate | 235 W |
| | 15 minute rate | 420 W |
| | 10 minute rate | 564 W |
| | 5 minute rate | 850 W |
| Internal resistance 77°F (25°C) | Fully charged battery | Approx. 60mΩ |
| Temperature dependency of capacity (10 hour rate) | 104°F (40°C) | 102 % |
| | 77°F (25°C) | 100 % |
| | 32°F (0°C) | 85 % |
| | 5°F (-15°C) | 65 % |
| Self discharge at 77°F (25°C) | Residual capacity after standing 3 months | 91% |
| | Residual capacity after standing 6 months | 82% |
| | Residual capacity after standing 12 months | 65% |
| Charge Method (Current limited Constant Voltage) | Trickle use | Control voltage |
| | | 27.2 to 27.6 V (per 24V cell at 77°F (25°C)) |

Watt Table

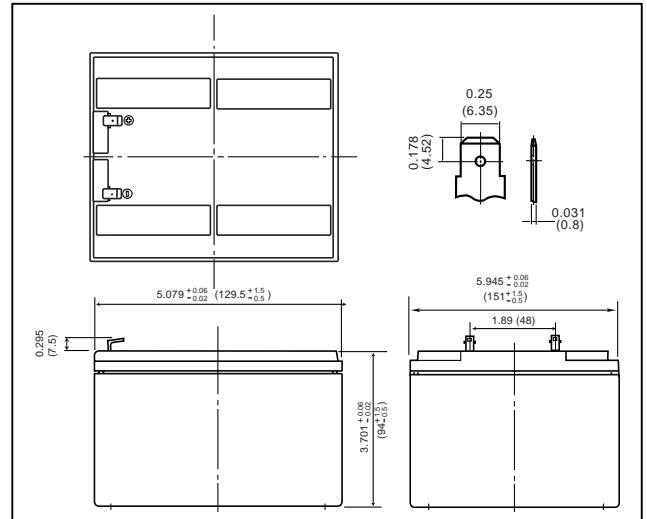
| Cutoff V/cell | Discharge Runtime at 77°F (25°C) | | | | | | |
|---------------|----------------------------------|--------|--------|---------|---------|---------|---------|
| | 3 min. | 5 min. | 7 min. | 10 min. | 15 min. | 20 min. | 30 min. |
| 1.60 | 1100 | 850 | 685 | 564 | 405 | 325 | 235 |
| 1.70 | 1000 | 800 | 651 | 543 | 390 | 312 | 222 |
| 1.80 | 820 | 665 | 562 | 483 | 360 | 292 | 218 |

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

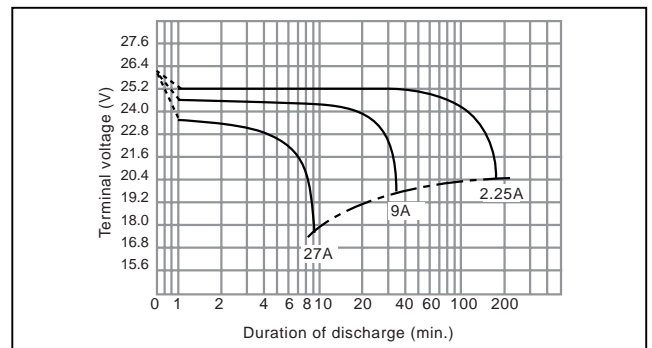
*This battery is designed for high rate discharge and the 20 hour rate discharge capacity is for reference only. For cycle use of the battery, please contact Panasonic in advance.

* This product adopts UL94HB-compliant resin as the material of the battery case. Product color is black. Optionally, type UP-VW2447 which adopts flame-retardant resin complying with UL94V-0 is also available. Product color is gray.

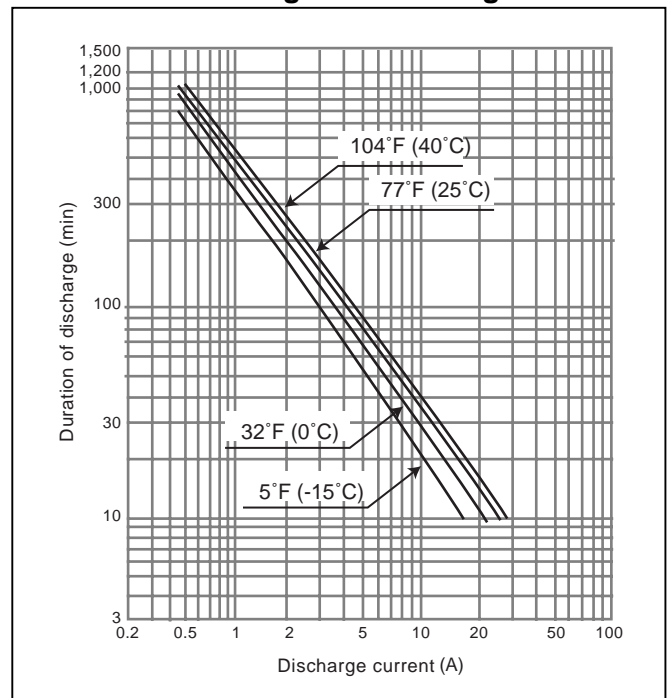
Dimensions inch (mm)



Discharge characteristics (77°F (25°C)) (note)



Duration of discharge vs. Discharge current



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