

### EXA1224W

12V 24W

#### SPECIFICATIONS

**Nominal Voltage (V)** 12V

#### Nominal Capacity

|              |                   |              |
|--------------|-------------------|--------------|
| 15 min rate  | (144W to 9.60V)   | <b>36Wh</b>  |
| 20 hour rate | (0.3A to 10.50V)  | <b>6Ah</b>   |
| 10 hour rate | (0.57A to 10.50V) | <b>5.7Ah</b> |
| 5 hour rate  | (1.02A to 10.20V) | <b>5.1Ah</b> |
| 1 C          | (6A to 9.60V)     | <b>3.8Ah</b> |
| 3 C          | (18A to 9.60V)    | <b>2.4Ah</b> |

**Weight** Approx. **2.0kg(4.4Lbs.)**

**Internal Resistance (at 1KHz)** Approx. **16 mΩ**

**Maximum Discharge Current for 5 seconds :** **90A**

#### Charging Methods at 25°C(77°F)

##### Cycle use:

Charging Voltage **14.4 to 15.0V**

Coefficient -5.0mV/°C/cell

Maximum Charging Current **1.8A**

##### Standby use:

Float Charging Voltage **13.5 to 13.8V**

Coefficient -3.0mV/°C/cell

#### Operating Temperature Range

Charge **-15°C(5°F)** to **40°C(104°F)**

Discharge **-15°C(5°F)** to **50°C(122°F)**

Storage **-15°C(5°F)** to **40°C(104°F)**

#### Charge Retention (shelf life) at 20°C(68°F)

1 month **92%**

3 month **90%**

6 month **80%**

**Case Material** **ABS UL94 HB**

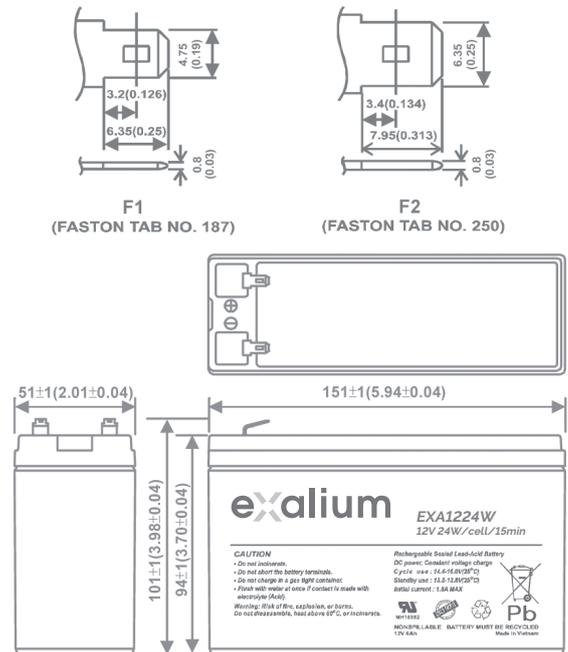
Option: Flammability resistance of (UL94 V-0)

**Terminal** **F1 or F2 (Faston Tab 187 or 250)**



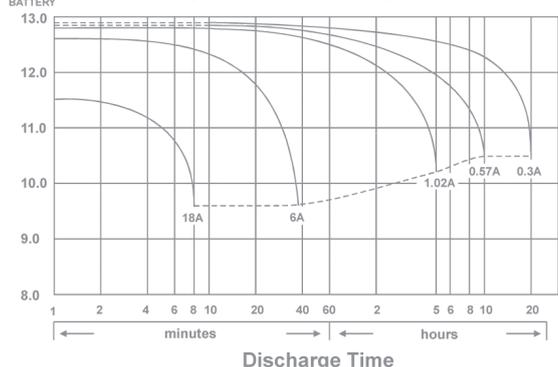
#### DIMENSIONS

mm (inch)



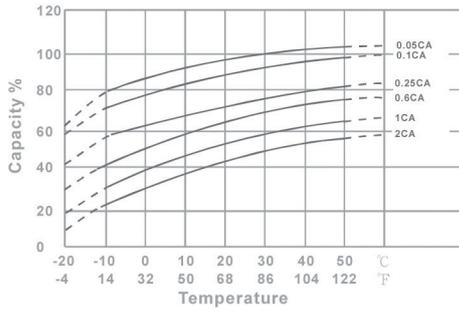
(V)  
FOR 12V  
BATTERY

#### Discharge Time VS. Discharge Current (25°C)

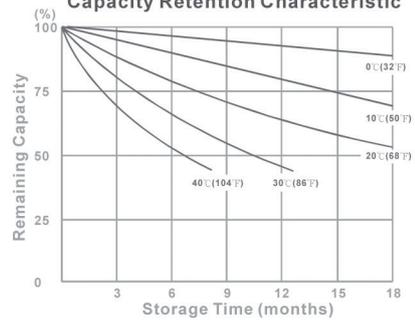


# EXA1224W 12V 24W

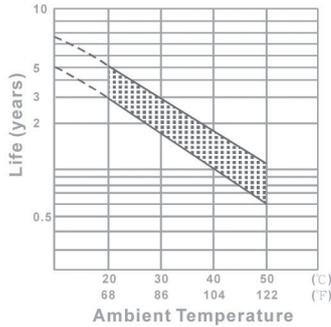
Effect of Temperature on Capacity 25°C (77°F)



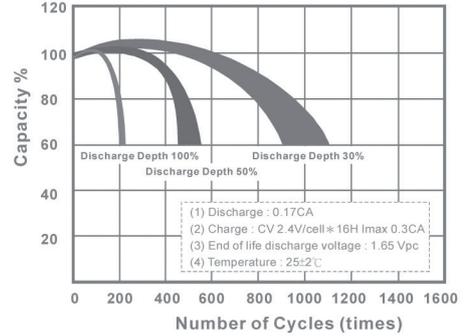
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



## PERFORMANCE DATA

### Discharge Rates in Watts to Various End Voltages at 25°C(77°F)

| Time | End Voltage | Discharge Rate (W) |       |       |       |       |       |       |
|------|-------------|--------------------|-------|-------|-------|-------|-------|-------|
|      |             | 1.85V              | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
| 5    | min         | 37.8               | 43.7  | 47.3  | 50.4  | 51.3  | 52.4  | 54.0  |
| 8    | min         | 28.0               | 32.5  | 35.7  | 38.0  | 39.0  | 39.8  | 41.0  |
| 10   | min         | 25.7               | 29.2  | 31.3  | 33.0  | 33.9  | 34.3  | 35.3  |
| 15   | min         | 20.3               | 22.4  | 23.8  | 25.0  | 25.3  | 25.8  | 26.3  |
| 20   | min         | 16.3               | 17.7  | 19.0  | 19.9  | 20.2  | 20.5  | 20.8  |
| 30   | min         | 13.3               | 14.3  | 14.8  | 15.2  | 15.4  | 15.6  | 15.9  |
| 60   | min         | 7.20               | 7.73  | 8.03  | 8.30  | 8.38  | 8.48  | 8.64  |
| 120  | min         | 4.40               | 4.65  | 4.87  | 5.02  | 5.07  | 5.13  | 5.22  |
| 300  | min         | 2.01               | 2.14  | 2.22  | 2.29  | 2.31  | 2.34  | 2.37  |
| 600  | min         | 1.26               | 1.29  | 1.30  | 1.31  | 1.32  | 1.32  | 1.33  |
| 1200 | min         | 0.688              | 0.700 | 0.709 | 0.717 | 0.720 | 0.723 | 0.726 |

### Discharge Rates in Amperes to Various End Voltages at 25°C(77°F)

| Time | End Voltage | Discharge Rate (A) |       |       |       |       |       |       |
|------|-------------|--------------------|-------|-------|-------|-------|-------|-------|
|      |             | 1.85V              | 1.80V | 1.75V | 1.70V | 1.67V | 1.65V | 1.60V |
| 5    | min         | 19.1               | 22.6  | 24.9  | 27.0  | 27.7  | 28.6  | 29.8  |
| 8    | min         | 17.0               | 18.8  | 19.9  | 20.8  | 21.1  | 21.5  | 22.1  |
| 10   | min         | 14.2               | 15.7  | 16.8  | 17.7  | 18.0  | 18.4  | 19.0  |
| 15   | min         | 11.3               | 12.2  | 12.9  | 13.4  | 13.6  | 13.7  | 13.9  |
| 20   | min         | 9.71               | 10.2  | 10.3  | 10.7  | 10.9  | 11.0  | 11.2  |
| 30   | min         | 6.78               | 7.19  | 7.46  | 7.69  | 7.78  | 7.90  | 8.07  |
| 60   | min         | 3.63               | 3.85  | 4.00  | 4.13  | 4.19  | 4.24  | 4.32  |
| 120  | min         | 1.88               | 2.01  | 2.12  | 2.21  | 2.25  | 2.29  | 2.34  |
| 300  | min         | 0.961              | 1.032 | 1.071 | 1.097 | 1.108 | 1.12  | 1.13  |
| 600  | min         | 0.593              | 0.612 | 0.619 | 0.626 | 0.628 | 0.631 | 0.636 |
| 1200 | min         | 0.319              | 0.327 | 0.332 | 0.337 | 0.339 | 0.341 | 0.343 |

All data on the spec. sheet is an average value:

The tolerance range : X < 6min(+15%~-15%), 6min ≤ X < 10min(+12%~-12%), 10min ≤ X < 60min(+8%~-8%), X ≥ 60min(+5%~-5%)