



XTREME SERIES - FLAME RETARDANT

XR-20FR (12V20AH/80W)

Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	18.0Ah at 1.80V/cell @25°C/77°F	
Watts(15min Rated)	80.0 Watts/cell at 1.67V/cell @25°C/77°F	
Dimension	Length	181.5±1mm (7.14 inches)
	Width	77±1mm (3.03 inches)
	Container Height	166.5±1mm (6.56inches)
	Total Height (with Terminal)	166.5±1mm (6.56inches)
	Approx Weight	Approx 5.8 kg (12.9lbs)
Terminal	T12	
Container Material	ABS	
Rated Capacity	18.0 AH/1.80A	(10hr , 1.80V/cell,25°C/77°F)
	17.4 AH/2.17A	(8hr, 1.80V/cell,25°C/77°F)
	16.1 AH/3.22A	(5hr, 1.75V/cell,25°C/77°F)
	14.6 AH/4.88A	(3hr, 1.75V/cell,25°C/77°F)
	13.6 AH/13.6A	(1hr, 1.60V/cell,25°C/77°F)
CCA/CA	240A/340A	
Internal Resistance	Approx 8.0mΩ	
Operating Temp.Range	Discharge	-15±50°C (5±122°F)
	Charge	0±40°C (32±104°F)
	Storage	-15±40°C (5±104°F)
Nominal Operating Temp. Range	25 3°C (77 5°F)	
Cycle Use	Initial Charging Current less than 5.4A.Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Leoch LCP series batteries may be stored for up to 9 months at 25°C(77°F) and then a freshening charge is required.	
	For higher temperatures the time interval will be shorter.	

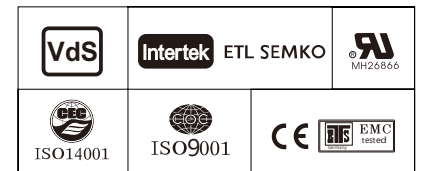


Applications

- ◆ UPS (High rate)
- ◆ Emergency power supply
- ◆ Banks & Financial Markets
- ◆ Hospitals & Testing Laboratories
- ◆ Industrial Process Control Facilities
- ◆ Date & Network Operations Centers

Compliant Standards

- ◆ IEC60896-21/22:2004
- ◆ BS 6290 Part 4



Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	25min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	50.1	37.9	31.9	26.8	22.6	19.6	14.1	11.1	7.85	6.23	4.55	3.63	3.04	2.06	1.70
1.80V/cell	58.2	42.2	35.1	29.5	24.6	21.2	15.2	11.9	8.41	6.65	4.81	3.81	3.19	2.17	1.80
1.75V/cell	65.6	46.3	38.2	31.3	26.1	22.3	15.8	12.4	8.73	6.88	4.95	3.92	3.26	2.20	1.82
1.70V/cell	72.3	50.4	41.1	33.2	27.5	23.5	16.4	12.8	8.98	7.06	5.04	3.99	3.32	2.23	1.84
1.67V/cell	77.3	53.8	43.5	34.6	28.4	24.2	16.9	13.1	9.2	7.21	5.13	4.05	3.37	2.25	1.86
1.60V/cell	82.5	57.4	45.3	35.9	29.4	24.9	17.2	13.3	9.3	7.32	5.19	4.10	3.41	2.27	1.87

Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	25min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	93.8	72.2	61.5	52.2	44.3	38.6	28.0	22.2	15.7	12.5	9.18	7.35	6.18	4.22	3.48
1.80V/cell	107.6	79.5	67.1	56.9	47.9	41.5	30.1	23.8	16.8	13.3	9.67	7.69	6.45	4.42	3.68
1.75V/cell	119.6	86.0	72.2	59.9	50.4	43.4	31.2	24.7	17.4	13.7	9.92	7.88	6.58	4.47	3.71
1.70V/cell	129.5	92.3	76.7	62.8	52.4	45.2	32.1	25.3	17.8	14.0	10.1	8.02	6.69	4.52	3.75
1.67V/cell	135.7	96.8	80.0	64.7	53.8	46.2	32.7	25.6	18.1	14.3	10.2	8.11	6.76	4.56	3.78
1.60V/cell	141.6	101.2	81.9	66.2	54.8	47.0	33.0	25.8	18.2	14.4	10.3	8.15	6.83	4.58	3.80

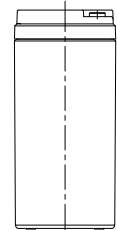
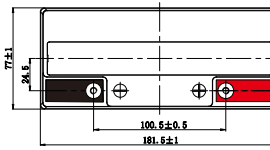
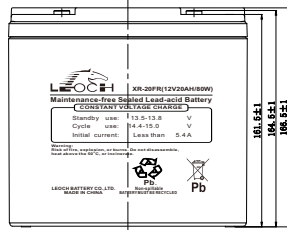
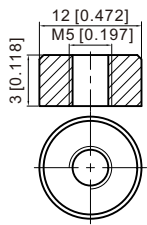
Specifications subject to change without notice.



Dimensions

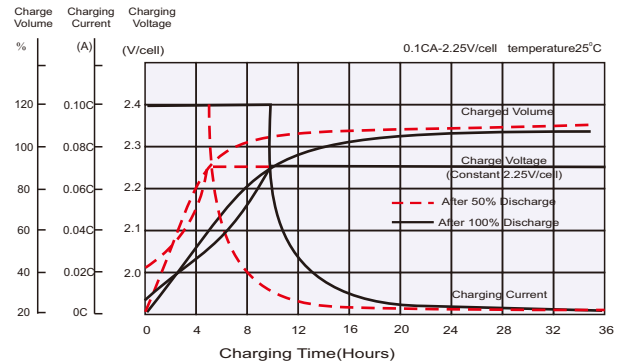
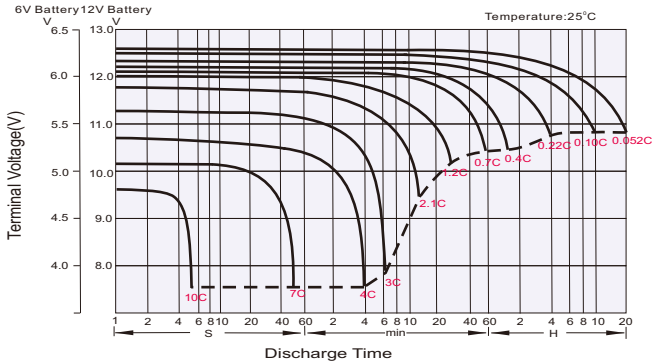
T12 Terminal

Unit: mm [inches]



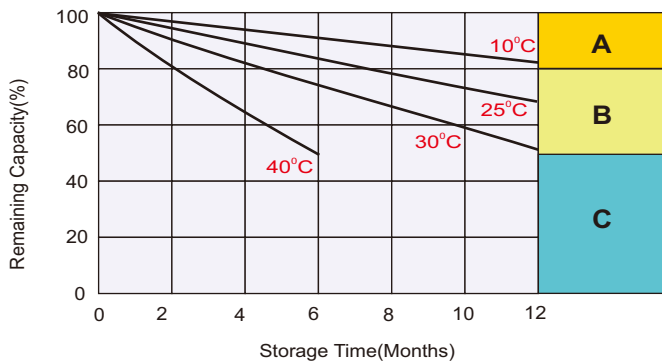
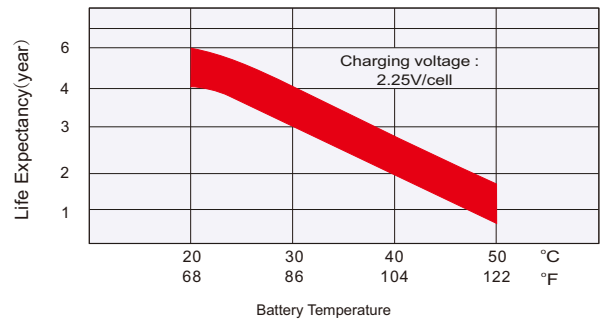
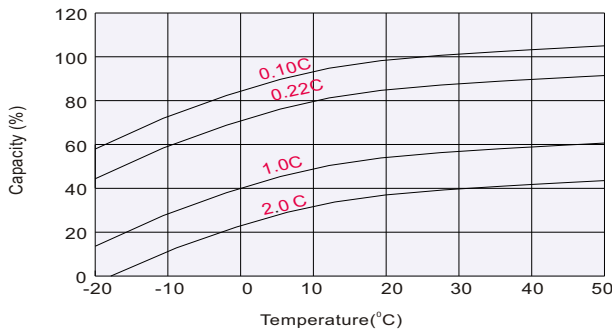
Discharge Characteristics

Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity

Effect of Temperature on Long Term Float Life



Self Discharge Characteristics

- A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
 1. Charged for above 3 days at limited current 0.25CA and constant volatge 2.25V/cell.
 2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
 3. Charged for 8~10hours at limited current 0.05CA .
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

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