



AMARA RAJA
Gotta be a better way



AMARON || **SLEEK** |
Hi Life Batteries
12V FTA SERIES

The future belongs to those who stake a claim for it here and now. This axiom has been our guiding principle at Amara Raja, helping us ceaselessly innovate and explore the new and never-before.

Amara Raja has put its vision into practice by striding forward in the power management industry and consolidating its position as one of the leading players in the Indian Ocean Rim.

Powered by Innovation and strategic association with technology giants like GNB, USA (a 10 year technical collaboration) and Johnson Controls Inc., USA (a 20 year vibrant JV), facilitated Amara Raja in sharing of knowledge and innovations to accelerate and expand development efforts in the global battery market. It also enables harnessing technology that acclimatized batteries to operate in harsh tropical conditions.



Amara Raja's plant facility is backed by one of the finest Research & Development centers on site. A center that constantly and unceasingly thinks out-of-the-box and develops products and services that match world-class standards, and sets industry benchmarks.

Amara Raja's Energy & Mobility Excellence Center is another first for the region. Here, products are put through rigorous tests to ensure that they comply with international standards and design requirements. With the latest testing equipment, the center evaluates battery performance, design and longevity. Apart from this, there are facilities for application engineering, vehicle system study, simulations and computer-aided design, including a full calibration laboratory. Amara Raja's quality commitment has ensured that it conforms to International quality standards.

Quality Edge

- Produced in state-of-the-art ISO 9001, certified facility
- ISO 45001: 2018
- Continuous improvement through Internationally acclaimed tools like TQM, Kaizen, Six Sigma, 5S

Quality Systems certified to
ISO 9001: 2015
ISO 14001: 2015
ISO 45001: 2018

PERFORMANCE EDGE

- Design Float life of 12+ years in accordance with Eurobat Classification of Long Life battery
- Designed to perform in harsh tropical conditions
- Front Terminal Batteries
- Integral Dual handles for easy handling & installation
- Suitable for standard 23" rack
- High Volumetric Energy Density for maximum power in minimal foot print area
- Short Recharge Time owing to Lower Internal resistance
- Patented Lead Oxide Paste Recipe offering excellent charge acceptance and low self-discharge rate
- Innovative plate design offers low internal resistance and superior high rate discharge performance
- Advanced AGM separator offering a longer service life and enhanced high rate discharge performance
- Automated, state-of-the-art cast-on strap process ensures consistent, high-quality, low electrical resistance welds
- Automated InterCell Welding offering low Internal resistance
- Threaded Post Copper Insert Terminals offering high conductivity and torque retention
- Lip & Tongue type Heat Sealing to ensure a leak-proof seal
- 100% charged when shipped from factory



INTERNATIONAL COMPLIANCE

- Compliance to IEC 60896-21/22:2004 and IEC 61427 Standards
- Compliance to IS 15549
- CE Marking for Conformance Europeene, ratified by Underwriters Laboratories
- UL Approved
- Conformity to country specific standards / license programs
- Complies to 1997 UBC Zone 4 Seismic Requirements
- Classified as Non Hazardous Cargo and complies to requirements of IMDG (International Maritime Code for Dangerous Goods)
- Complies to Air Transport Requirement - IATA/ICAO special provision A67
- Completely Recyclable - Lead, Plastic and Sulphuric acid can be recycled and reused



TECHNICAL SPECIFICATIONS

Product:

- **Container & Cover** - Thick Reinforced Wall in Fire Retardant Polypropylene Co-polymer (UL 94 - V0)
- **Seperator** - High Weight Basis AGM
- **Positive Plate** - Radial Grid Flat Pasted Type
- **Positive Plate Alloy** - Hybrid Alloy with Long Life Characteristics
- **Negative Plate** - Radial Grid Flat Pasted Type
- **Negative Plate Alloy** - Lead Calcium Alloy with Maintenance Free Characteristics
- **Threaded Post Copper Insert Terminals** offering high conductivity and torque retention
- **Safety Valve** -Self Resealing, Pressure Regulated, Explosion Proof with Integral Flame Arrestor

Backed by its unflinching commitment to offer the best of technology and quality, Amara Raja offers you Amaron SLEEK, the compact power house.

APPLICATION SPECTRUM

Amaron SLEEK provides robust backup power solutions for varied applications.

MAJOR APPLICATION AREAS INCLUDE

→ **Wireless Telecommunications**

→ **Broadband Network**

→ **Microwave**

→ **In-building Solutions**

→ **Wi-Max**

→ **Solar Power Micro BTS**

→ **Optical Fiber Network**

PERFORMANCE:

- **Self-discharge:** Less than 1% per week
- **Shelf life without re-charge:** Upto 6 Months*
- **Operating conditions:** -20° C to + 60° C
- **Design Float Life:** 12+ years at 27°C classified as Long Life as per Eurobat Classification
- **Recombination Efficiency:** >98%

Note:

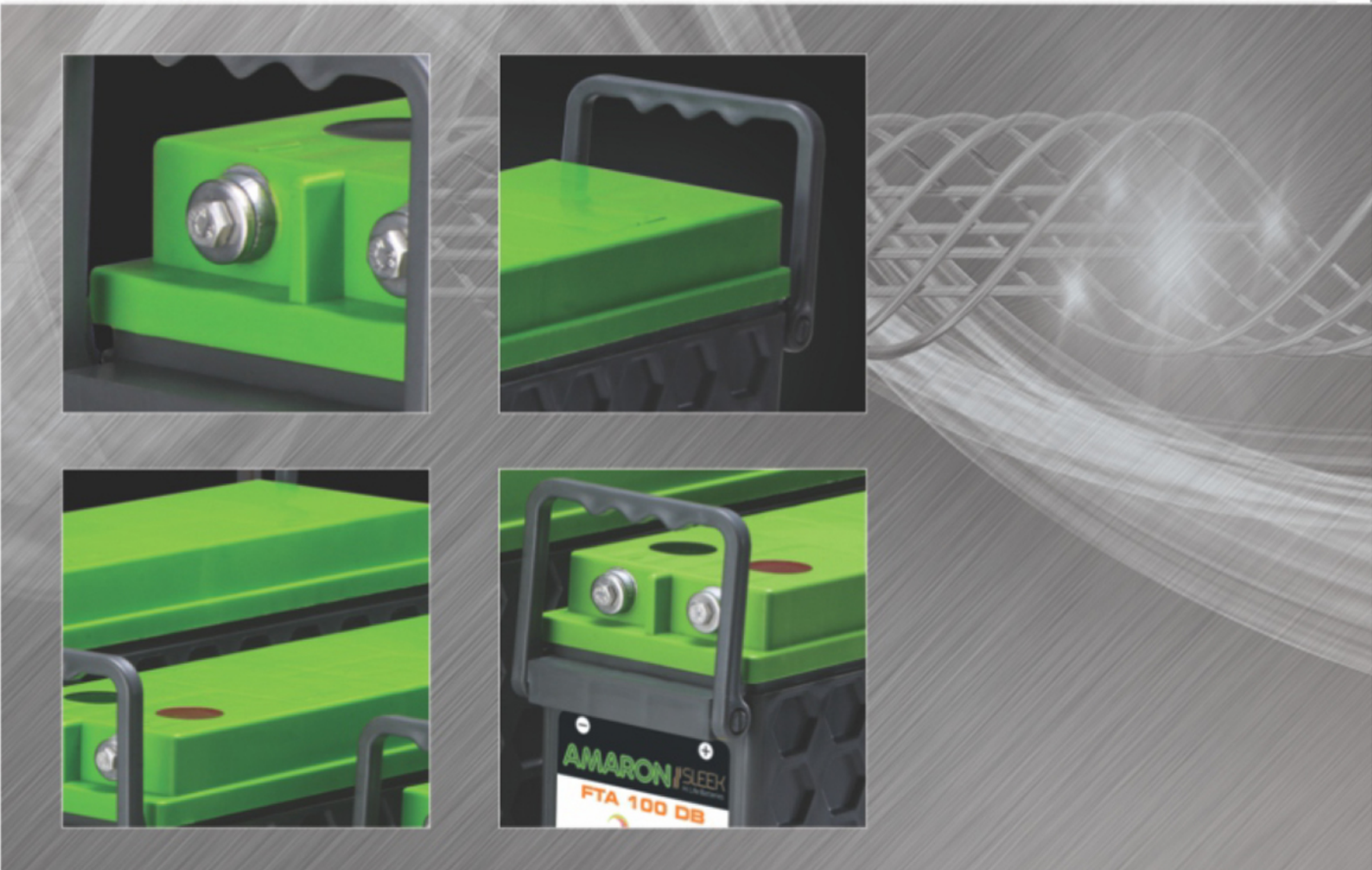
- All values are rated at 27°C.

Method: Constant Potential Current Limited

Charge Provision	Charging Voltage for Module	Maximum Charging Current (Amps)
Float charge	13.5 V	0.3 C
Boost charge	13.8 V	0.3 C

C is the rated capacity @ 10 hour
Charging parameters at 27°C

**Please refer to operating manual for storage instructions*



MODULE SPECIFICATION

Sl. No.	Model	Nominal Ah Capacity @ C10 to 10.5 EMV at 27°C	Nominal Voltage (V)	Dimensions (mm) ± 3mm			Weight (Kg) ± 3%	Terminal
				W	D	H		
1	FTA 100 DB	100	12	128	556	224	36.0	M6
2	FTA 150 DB	150	12	128	556	296	50.0	M6
3	FTA 170 DB	170	12	129	559	327	57.0	M8
4	FTA 190 DB	190	12	129	559	327	58.5	M8



RAV4

SPECIFICATIONS

WATTS PER CELL FOR 1.75 ECV @ 27°C

Sl. No.	Cell Type	Nominal Ah Capacity @ C10 at 27°C	Discharge Power in Watts													
			15 Min	30 Min	60 Min	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	10 Hrs	12 Hrs	20 Hrs	24 Hrs
1	FTA 100 DB	100	285.0	177.7	112.3	67.1	51.1	40.8	33.4	29.0	26.1	23.1	18.9	16.1	10.0	8.5
2	FTA 150 DB	150	427.5	266.6	168.5	100.7	76.6	61.2	50.2	43.5	39.1	34.7	28.4	24.1	15.0	12.8
3	FTA 170 DB	170	440.9	280.9	181.4	108.4	85.1	68.0	55.6	48.3	43.5	38.5	31.5	26.8	16.7	14.2
4	FTA 190 DB	190	487.4	314.0	202.7	121.1	95.1	76.0	62.2	54.0	48.6	43.0	35.2	30.0	18.6	15.8

WATTS PER CELL FOR 1.80 ECV @ 27°C

Sl. No.	Cell Type	Nominal Ah Capacity @ C10 at 27°C	Discharge Power in Watts													
			15 Min	30 Min	60 Min	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	10 Hrs	12 Hrs	20 Hrs	24 Hrs
1	FTA 100 DB	100	273.7	170.8	106.2	65.0	48.0	38.3	31.8	27.5	24.7	21.9	18.9	15.9	9.7	8.0
2	FTA 150 DB	150	410.6	256.3	159.3	97.5	72.0	57.5	47.6	41.4	37.0	32.8	28.4	23.8	14.6	12.1
3	FTA 170 DB	170	423.4	270.0	171.5	105.0	80.0	63.8	53.0	45.8	41.2	36.5	31.5	26.5	16.2	13.3
4	FTA 190 DB	190	468.0	301.8	191.7	117.3	89.4	71.3	59.2	51.2	46.0	40.8	35.2	29.6	18.1	14.9

WATTS PER CELL FOR 1.85 ECV @ 27°C

Sl. No.	Cell Type	Nominal Ah Capacity @ C10 at 27°C	Discharge Power in Watts													
			15 Min	30 Min	60 Min	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	10 Hrs	12 Hrs	20 Hrs	24 Hrs
1	FTA 100 DB	100	258.3	164.8	104.7	62.5	46.1	37.0	31.4	26.8	23.9	21.1	17.3	15.2	9.1	7.5
2	FTA 150 DB	150	387.5	247.3	157.0	93.7	69.1	55.5	47.0	40.2	35.9	31.7	26.1	22.8	13.7	11.3
3	FTA 170 DB	170	399.6	260.5	169.1	100.9	76.8	61.6	52.3	44.6	39.8	35.2	28.8	25.3	15.2	12.5
4	FTA 190 DB	190	441.7	291.2	189.0	112.8	85.8	68.9	58.5	49.9	44.5	39.3	32.2	28.3	16.9	14.0

WATTS PER CELL FOR 1.90 ECV @ 27°C

Sl. No.	Cell Type	Nominal Ah Capacity @ C10 at 27°C	Discharge Power in Watts													
			15 Min	30 Min	60 Min	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	10 Hrs	12 Hrs	20 Hrs	24 Hrs
1	FTA 100 DB	100	236.1	144.4	97.4	60.0	44.1	35.7	28.7	24.8	22.2	19.6	16.0	13.7	8.2	7.1
2	FTA 150 DB	150	354.2	216.6	146.1	90.0	66.2	53.5	43.1	37.2	33.4	29.4	24.0	20.6	12.3	10.6
3	FTA 170 DB	170	365.2	228.3	157.3	96.9	73.5	59.5	47.8	41.3	37.0	32.7	26.7	22.8	13.7	11.8
4	FTA 190 DB	190	403.7	255.2	175.8	108.3	82.1	66.5	53.4	46.2	41.3	36.5	29.8	25.5	15.3	13.2

NOTE: The values declared may be subject to change with respect to ongoing continuous product improvement without any notice

RANGE

SPECIFICATIONS

AMPERES FOR 1.75 ECV @ 27°C

Sl. No.	Cell Type	Nominal Ah Capacity @ C10 at 27°C	Discharge Current in Amps													
			15 Min	30 Min	60 Min	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	10 Hrs	12 Hrs	20 Hrs	24 Hrs
1	FTA 100 DB	100	155.5	96.0	59.8	35.1	26.5	21.1	17.2	14.9	13.2	11.9	10.0	8.4	5.4	4.7
2	FTA 150 DB	150	233.3	144.2	89.7	52.7	39.7	31.7	25.8	22.3	19.9	17.8	15.0	12.6	8.0	7.0
3	FTA 170 DB	170	237.9	153.0	96.0	56.7	43.0	35.2	28.5	24.8	22.0	19.6	17.0	14.0	9.0	7.8
4	FTA 190 DB	190	265.9	170.0	108.0	63.4	50.0	39.3	33.0	27.7	24.6	23.0	19.0	15.6	10.1	8.8

AMPERES FOR 1.80 ECV @ 27°C

Sl. No.	Cell Type	Nominal Ah Capacity @ C10 at 27°C	Discharge Current in Amps													
			15 Min	30 Min	60 Min	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	10 Hrs	12 Hrs	20 Hrs	24 Hrs
1	FTA 100 DB	100	150.7	94.3	58.3	35.0	25.6	20.4	16.9	14.6	12.9	11.8	10.0	8.3	5.2	4.4
2	FTA 150 DB	150	226.2	141.3	87.5	52.5	38.4	30.6	25.3	22.0	19.5	17.6	15.0	12.4	7.8	6.7
3	FTA 170 DB	170	230.6	150.0	93.6	56.5	41.6	34.0	27.9	24.3	21.5	19.3	17.0	13.8	8.7	7.3
4	FTA 190 DB	190	257.7	167.0	105.0	63.2	48.0	38.0	32.0	27.2	24.0	22.0	19.0	15.5	9.7	8.2

AMPERES FOR 1.85 ECV @ 27°C

Sl. No.	Cell Type	Nominal Ah Capacity @ C10 at 27°C	Discharge Current in Amps													
			15 Min	30 Min	60 Min	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	10 Hrs	12 Hrs	20 Hrs	24 Hrs
1	FTA 100 DB	100	142.0	87.5	55.4	34.0	24.8	19.8	16.1	13.8	12.3	10.9	9.0	7.9	4.9	4.3
2	FTA 150 DB	150	213.1	131.2	83.0	51.1	37.2	29.7	24.0	20.8	18.4	16.4	13.4	11.9	7.4	6.5
3	FTA 170 DB	170	217.3	138.3	89.5	54.9	41.3	33.0	26.8	23.0	20.5	18.2	15.0	13.2	8.2	7.2
4	FTA 190 DB	190	242.8	154.6	100.0	61.4	46.2	36.9	30.0	25.7	22.9	20.3	16.8	14.7	9.1	8.0

AMPERES FOR 1.90 ECV @ 27°C

Sl. No.	Cell Type	Nominal Ah Capacity @ C10 at 27°C	Discharge Current in Amps													
			15 Min	30 Min	60 Min	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	10 Hrs	12 Hrs	20 Hrs	24 Hrs
1	FTA 100 DB	100	130.6	76.0	51.1	31.1	22.8	18.3	14.7	12.7	11.4	10.1	8.2	7.3	4.4	3.8
2	FTA 150 DB	150	196.0	114.0	76.5	46.6	34.2	27.4	22.1	19.2	17.1	15.1	12.3	10.9	6.6	5.8
3	FTA 170 DB	170	199.8	120.2	82.5	50.2	38.0	30.5	24.5	21.2	19.0	16.8	13.7	12.2	7.3	6.3
4	FTA 190 DB	190	223.3	134.3	92.2	56.1	42.5	34.1	27.4	23.6	21.2	18.8	15.3	13.6	8.2	7.1

NOTE: The values declared may be subject to change with respect to ongoing continuous product improvement without any notice
The above data are average values and tolerance of ±5% is applicable for the above constant current and power discharge values.



Amara Raja Energy & Mobility Limited
(Formerly known as Amara Raja Batteries Limited)

Corporate Operations Office:
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Gachibowli, Hyderabad - 500 032. INDIA

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Andhra Pradesh, INDIA

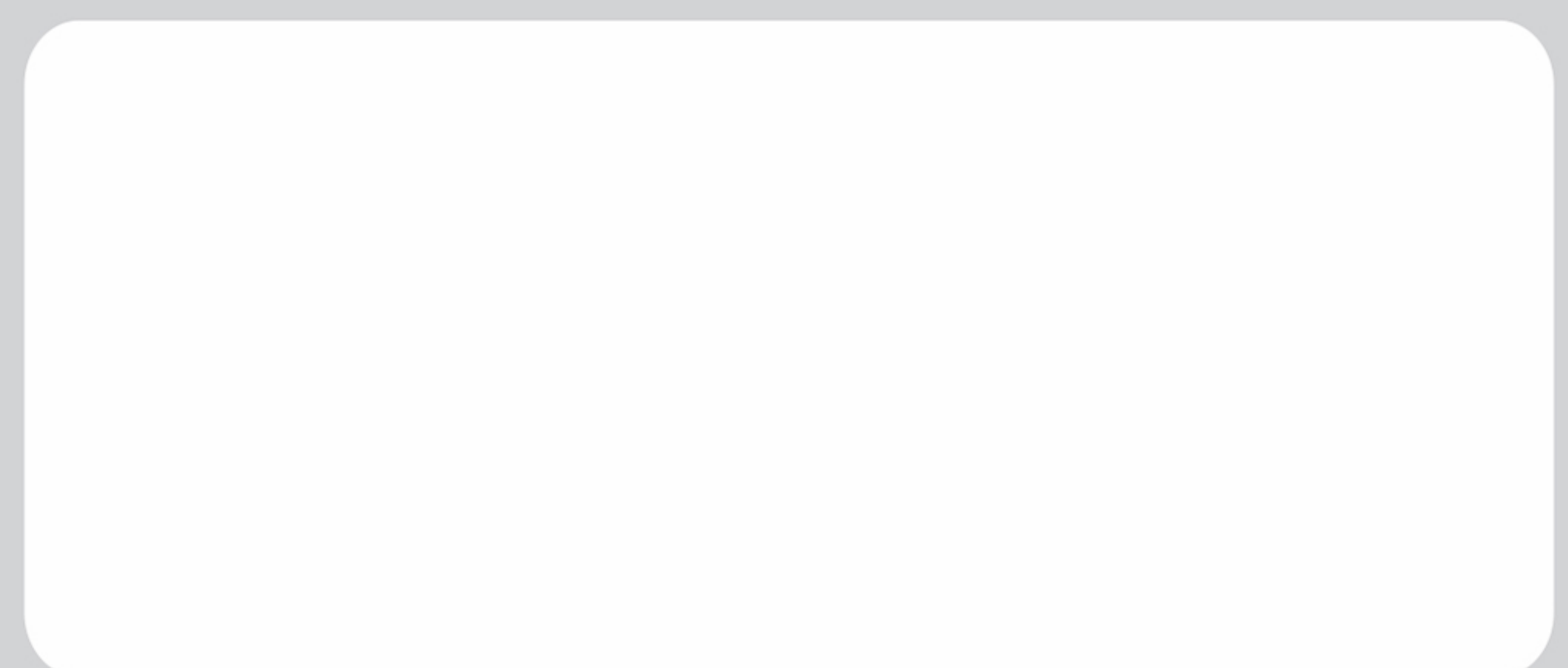
Manufacturing Facility-2
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ISO 9001 : 2015 | ISO 14001 : 2015 | ISO 45001 : 2018 |



Contains Lead Please
handover at approved
waste handling point



Completely
Recyclable



Protect eyes
from Electrolyte



Electrical
Hazard



Read
Instructions

