



The **Long Duration Telecom (LDT-Series)** of Valve Regulated Lead Acid batteries feature the latest advancement in plate and battery technology offering exceptional service life, low self discharge, high cycling capabilities and low float charge current characteristics.

LDT-Series VRLA batteries with optimized recombination technology and superior performance are specifically engineered and designed for Telecommunication applications requiring the highest level reliability and integrity.

LDT-Series VRLA batteries are manufactured in compliance with NEBS, GR, SR, IEC, BS, UL, ISO, and CE quality and performance standards.

LDT-Series VRLA batteries are available in both modular, 4-post and standard 19" and 23" rack power systems meeting NEBS and UBC Seismic Zone 4 requirements.

Applications

WIRELINE
WIRELESS
MICROWAVE

MOBILE SWITCHING SYSTEMS
PBX SYSTEMS
BROADBAND HEADEND

SWITCHGEAR
DATA CENTERS
ALTERNATIVE ENERGY

Battery Features

- 12-Year Design Life >20Ah; 8-Year Design Life <20Ah
- Initial (Out-of-box) capacity at 100%
- 6 month of storage at 77°F (25°C) capacity > 86%
- Low pressure one-way flame arresting valve(s) UL924
- Absorbent Glass Mat (AGM) technology
- Recombination efficiency of 99.9%
- Flame Retardant ABS Cover and Container, UL94 V-0, LOI>28%
- High reliability thermally welded tongue-n-groove case to cover seal
- Proprietary 3 part post-to-cover seal ensuring operating service life integrity
- Copper alloy insert front and top terminals for ease of installation and maximum current carrying capabilities
- UL Recognized Component
- Classified as Nonspillable UN 2800 (no air, ground, or sea transportation restrictions)
- Monoblock 6v & 12v construction
- Low-Calcium-Tin grid alloy

Standards

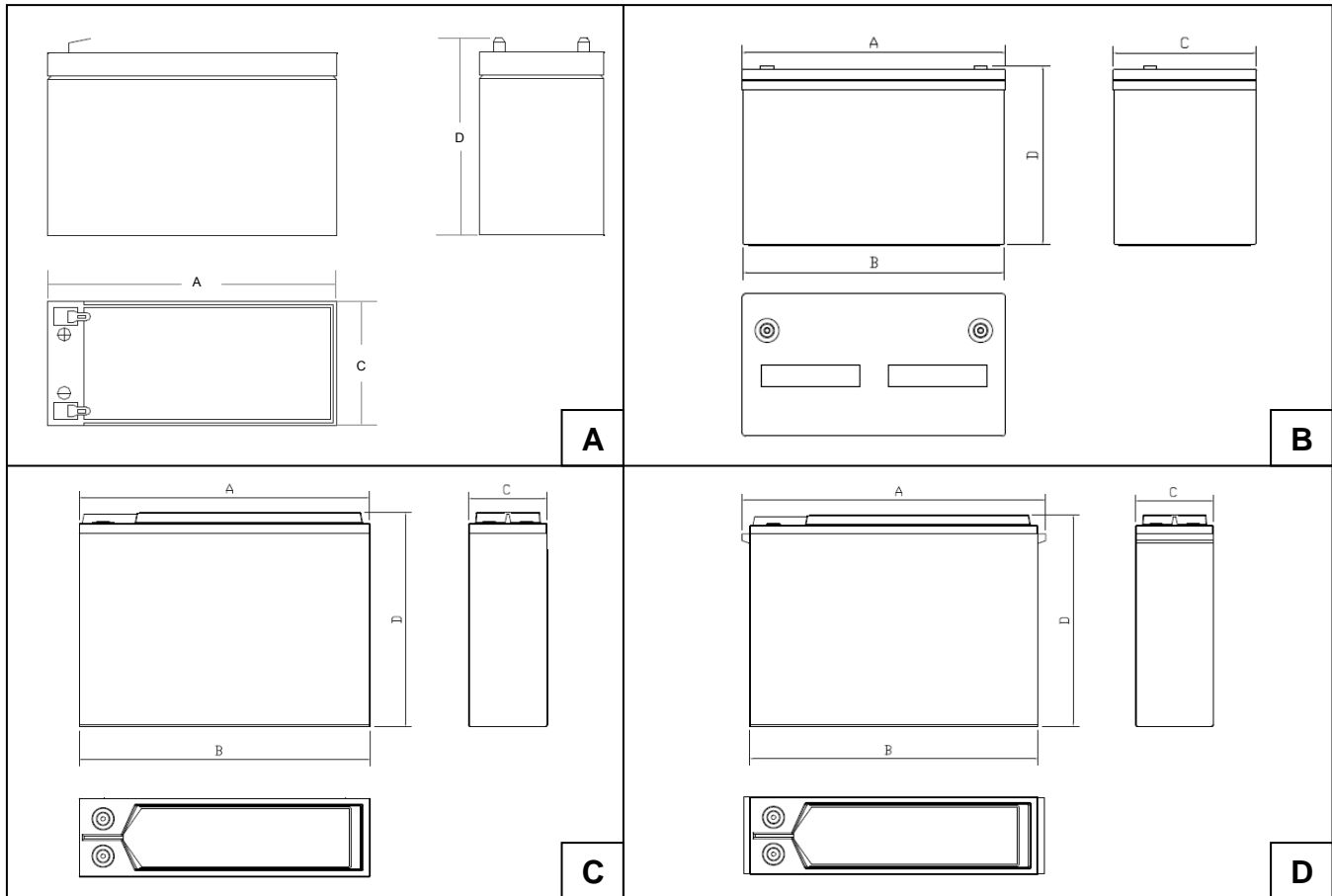
- Compliant to:
 - NEBS Version 4, Level 3
 - Telcordia GR-1089-CORE, Issue 3
 - Telcordia GR-63-CORE, Issue 3
 - Telcordia SR-4228
 - Telcordia GR-1200-CORE, Issue 1
 - EUROBAT Guide
 - BS6290 Part 4
 - IEC 60896-21/-22
- UL Recognized Component 924, 1778, 1989, UL Certified Vertical Flame Test Rating 94V-0
- NEBS Earthquake Risk Seismic Zone 4 Compliant
- Exceeds 1997 UBC Zone 4 seismic requirements for at or below grade installations
- Exceeds 2000/2003 IBC requirements for 125% g level
- Classified as Nonspillable UN 2800 and meet the nonspillable criteria listed in DOT-CFR Title 49, 171-189 (d) (3) (i) and (ii) and exempt from CFR 49, Subchapter C requirements
- Meets transportation conditions of IMDG exemption 238, IATA/ICAO Special Provision A67 (Not Restricted for air transport)
- Manufactured under certified compliance to:
 - ISO9001:2000
 - ISO14001

Specifications

Float Charging Voltage	2.25Vpc to 2.27Vpc @ 77°F (25°C)	
Charging Temperature Compensation	-2 mV/cell/°F > 77°F (-3.6 mV/cell /°C > 25°C) +2 mV/cell/°F < 77°F (+3.6 mV/cell/°C < 25°C)	
Equalize /Cycle or Freshening at Installation Charging Voltage	2.35Vpc to 2.40Vpc @ 77°F (25°C) See Operations and Maintenance Manual for specific guidelines and recharge times	
Maximum Charge Current	C ₅ Rate Amps (5 hour rate @ 1.75vpc)	
Maximum AC Ripple (Charger)	0.5% RMS, 1.5% peak-to-peak for float charge voltage for best results Maximum AC ripple voltage allowed 4% P-P	
Self Discharge Rate	<2% per month at 77°F (25°C)	
Electrolyte	Absorbed 1.300 s.g. H ₂ SO ₄	
Operating Temperature Range	Nominal	+74°F (24°C) to 80°F (27°C)
	Charge	-20°F (-28°C) to +122°F (50°C)
	Discharge	-40°F (-40°C) to +140°F (60°C)
Storage Temperature Range	-4°F (-20°C) to +104°F (40°C)	
Terminal Type	Torque	Retorque
F2 (7.2Ah)	N/A	N/A
M6-M (Male)	60 in-lbs (7 Nm)	48 in-lbs (5.6 Nm)
M6-F (Female <70Ah)	60 in-lbs (7 Nm)	48 in-lbs (5.6 Nm)
M6-F (Female >70Ah)	90 in-lbs (10 Nm)	78 in-lbs (8 Nm)
M8-F (Female)	90 in-lbs (10 Nm)	78 in-lbs (8 Nm)
Intercell Connection	Tin-Plated Cu Bar or High Flex Cable with Lug and Terminal Protector	
Relief Valve	Self Resealing; Operates at 2 to 3 psi and is complete with integral flame arrestor	



Physical Characteristics



Physical Characteristics

Top Terminal	V	Ah @ 8 hr to 1.75 77°F	Length (a)		Length Base (b)		Width (c)		Total Height (d)		Weight		Term. Type	Batt. Type
			in	mm	in	mm	in	mm	in	mm	lbs.	kg		
LDT12-7	12	7.4	5.94	151	-	-	2.56	65	3.98	101	4.74	2.2	F2	A
LDT12-28 *	12	28	6.50	165	-	-	4.93	125	6.89	175	22.0	10.0	M6-F	B
LDT12-30 *	12	32	7.70	196	-	-	5.10	130	7.10	180	23.2	10.5	M6-F	B
LDT12-45 *	12	52	9.02	229	-	-	5.44	138	8.46	215	40.0	18.0	M6-F	B
LDT12-70	12	72	10.20	259	-	-	6.65	169	8.41	215	52.0	23.5	M6-F	B
LDT12-80	12	86	12.09	307	-	-	6.65	169	8.50	216	64.0	29.0	M6-F	B
LDT12-90 *	12	94	12.02	305	-	-	6.62	168	8.35	212	70.0	32.0	M6-F	B
LDT12-100	12	96	12.64	321	-	-	6.78	172	8.75	222	70.4	32.0	M6-F	B
LDT12-125	12	128	13.43	341	12.90	328	6.80	172.5	11.34	288	91.3	41.5	M6-F	B
LDT6-200	6	200	12.68	322	-	-	6.93	176	9.09	231	70.6	32.0	M6-F	B

* Battery available with SLC Harness (-SLC to suffix) or with Charge Controller Harness (-CC to suffix)

Physical Characteristics

Front Terminal	V	Ah @ 8 hr to 1.75 77°F	Length (a)		Length Base (b)		Width (c)		Total Height (d)		Weight		Term. Type	Batt. Type
			in	mm	in	mm	in	mm	in	mm	lbs.	kg		
LDT12-90FT	12	90	15.55	395	14.25	362	4.13	105	10.08	256	67	30.5	M6-F	D
LDT12-100FT	12	105	15.51	394	15.51	394	4.33	110	11.26	286	71.0	32.0	M6-F	C
LDT12-105FT	12	104	20.00	508	20.00	508	4.33	110	9.29	236	72.0	33.0	M6-F	D
LDT12-120FT	12	120	21.70	552	21.70	552	4.33	110	9.41	239	80.0	36.0	M6-F	C
LDT12-150FT	12	150	21.70	552	21.70	552	4.33	110	11.30	288	100.0	45.0	M6-F	C
LDT12-155FT	12	155	22.40	560	20.88	530	4.90	125	11.20	282	119	54.0	M6-M	D
LDT12-170FT	12	171	22.40	560	20.70	526	4.90	125	12.40	316	119.0	54.0	M6-F	D
LDT12-180FT	12	181	22.40	560	20.70	526	4.90	125	12.40	316	119.0	54.0	M6-F	D
LDT12-190FT	12	190	22.40	560	20.70	526	4.90	125	12.40	316	119.0	54.0	M6-F	D

Constant Current Discharge Rate (Amps) at 77°F (25°C) to 1.75 vpc

Model	Operating Time (hours)										
	0.5	1	1.5	2	3	4	5	6	8	10	20
LDT12-7	8.4	5.1	4.1	3.1	1.9	1.6	1.3	1.2	0.9	0.7	0.4
LDT12-28	31.4	18.9	15.2	11.4	7.1	5.8	4.6	4.6	3.5	2.7	1.4
LDT12-30	32.3	21.0	17.0	12.9	8.5	7.0	6.2	5.2	4.0	3.3	1.7
LDT12-45	55.9	36.3	29.7	23.1	15.2	12.8	10.0	8.7	6.6	5.6	2.9
LDT12-70	80.3	47.6	38.5	29.3	19.3	15.9	12.5	11.8	9.0	7.6	3.9
LDT12-80	98.0	57.2	46.2	35.1	23.1	19.1	14.9	14.2	10.8	9.1	4.7
LDT12-90	106.8	62.2	50.2	38.2	25.2	20.8	16.3	15.4	11.8	9.9	5.1
LDT12-100	109.0	63.5	51.3	39.0	25.7	21.2	16.6	15.7	12.0	10.1	5.2
LDT12-125	146.0	85.1	68.7	52.3	34.4	28.4	22.2	21.1	16.1	13.5	7.0
LDT6-200	233.7	135.8	109.6	83.4	54.9	45.3	35.5	33.7	25.7	21.6	11.1

LDT12-90FT	105.1	61.4	44.2	35.1	25.4	20.2	17.1	14.6	11.3	9.4	5.0
LDT12-100FT	118.7	69.4	49.9	39.6	32.9	25.4	21.0	18.3	13.1	10.9	5.8
LDT12-105FT	116.0	70.0	50.4	40.0	28.9	23.0	19.5	16.7	13.0	10.7	5.7
LDT12-120FT	139.1	81.4	58.5	46.4	33.6	26.7	22.6	19.3	14.9	12.5	6.6
LDT12-150FT	174.1	101.8	73.2	58.1	42.1	33.4	28.3	24.2	18.7	15.6	8.3
LDT12-155FT	180.5	105.5	75.9	60.2	43.6	34.7	29.3	25.1	19.4	16.2	8.6
LDT12-170FT	198.5	116.1	83.4	66.3	48.0	38.1	32.3	27.6	21.3	17.8	9.5
LDT12-180FT	209.7	122.7	88.2	70.0	50.7	40.3	34.1	29.2	22.5	18.8	10.0
LDT12-190FT	220.9	129.2	92.9	73.7	53.4	42.4	35.9	30.7	23.7	19.8	10.6

For additional constant current and constant power discharge data please see individual product technical data sheets.