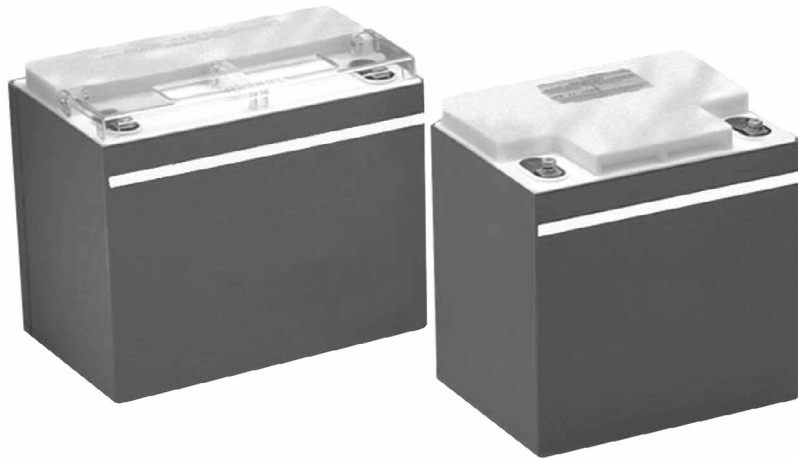


IR Series I Batteries

IR-30EC (12 V, 25 Ah) Battery

IR-40EC (12 V, 34 Ah) Battery

IR Series I batteries are designed to withstand the rigors of harsh environments and uncontrolled temperatures. The valve-regulated lead acid batteries are a cost-effective solution for small-load battery applications.



The valve-regulated IR Series I batteries are designed for use in outdoor cabinets.

The design of the IR Series I batteries provides a highly reliable, space-efficient, and cost-effective solution for small-load battery reserve applications. The valve-regulated technology permits simple handling or installation and reduced maintenance.

Dual Product Offering

The IR Series I 12 V batteries are available in two models: the IR-30EC 25 Ah and the IR-40EC 34 Ah. These batteries can be used for both constant voltage and constant current charging applications.

Typical Applications¹

- Subscriber loop applications (such as SLC 96 and Series 5 carrier systems) and various other distributed power cabinet applications
- Space-restricted power locations
- Customer premises applications
- Small outdoor wireless communication sites

Benefits

- Limited Maintenance
Because of leak-resistant post seals and the valve-regulated design, the IR Series I batteries require reduced maintenance compared to flooded batteries. Maintenance is limited to periodic inspection of battery voltage, resistance, ambient temperature, and inter-battery connections.

- Easy Installation
The IR-40EC battery has a patented, hinged-lifting handle incorporated into the battery cover design. The lifting handle aids in the installation of the battery. In addition, when the handle is not being used, it will lay over the battery terminals and protect them. The cover also features a wire trough where battery cables can be routed.

Both the IR-30EC and IR-40EC have pre-connected cables for quick and easy installation. An optional heavier gauge cable is available for high-rate discharge.

1. User should verify that proposed application is ventilated to meet UL† or Telecordia standards for hydrogen accumulation. Hydrogen accumulation in non-Lineage Power enclosures has not been confirmed.
2. UL is a registered trademark of Underwriters Laboratories, Inc.

- **Space Efficient**
The dimensions of the IR Series I battery allow it to replace existing batteries in most applications. In many cases, this equates to more power density in the same space.
- **High Reliability**
Five-year design life at 25 °C (77 °F).
- **Compatibility**
Ideal for use with distributed power cabinets.
- **Improved Safety**
The IR Series I batteries are ideal for most operating environments due to their leak-resistant seals, flame-retardant, non-halogenated, polypropylene jar and cover, high-strength steel outer jacket, and low gassing rate. (The IR series I battery generates almost no gas under normal float and recharge voltage conditions.)
(CAUTION: All lead acid batteries can produce hydrogen gas under some conditions. Never use in unventilated areas.) The IR-40EC has a protective cover/handle for ease of installation and stacking, while the IR-30EC has recessed bolt-type terminals and raised cover design to prevent shorting terminals.
- **Safety/Standards Compliance**
Flame-retardant, non-halogenated, polypropylene container and cover meet UL 94 V-0 and have an oxygen index greater than 28.

Features

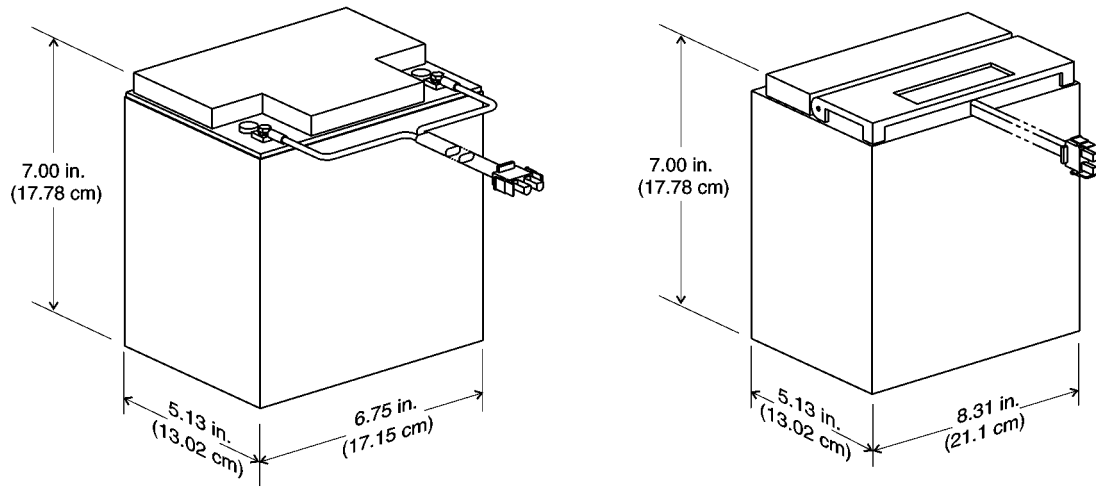
- Durable acid-resistant, coated, steel outer jacket
- Low gassing rate under normal operating conditions
- Low water vapor transmission
- Heavy-duty brass threaded terminals rarely require retorquing
- Patented lifting handle designed into battery cover (IR-40EC)
- Unique cover designs prevent terminal shorting when stacked
- Robust, leak-resistant epoxy post seals

Specifications

Model Number	IR-30EC	IR-40EC
Nameplate Capacity	25 Ah (8 hr. rate); 28 Ah (10 hr. rate)	34 Ah (8 hr. rate); 36 Ah (10 hr. rate)
Width	6.75 in. (17.15 cm)	8.31 in. (21.1 cm)
Depth	5.13 in. (13.02 cm)	5.13 in. (13.02 cm)
Height	7.00 in. (17.78 cm)	7.00 in. (17.78 cm)
Weight	21 lb. (9.5 kg)	26 lb. (11.8 kg)
Float Voltage	13.38 V/battery—13.68 V/battery	13.38 V/battery—13.68 V/battery
Internal Resistance	9.0 mΩ (Charged Battery)	8.0 mΩ (Charged Battery)
Terminals	Heavy-duty, low-maintenance, copper-threaded contact	Heavy-duty, low-maintenance, brass-threaded contact
Container and Cover Material	Flame-retardant, (28 non-halogenated polypropylene)	Flame-retardant, (28 non-halogenated polypropylene)
Outer Case	Acid-resistant, coated, steel jacket	Acid-resistant, coated, steel jacket
Hardware	10-32 x 0.50 bolt	10-32 x 0.50 bolt
Flammability Rating	UL 94 V-0, LOI~28	UL 94 V-0, LOI~28
Float Life	Five years at 25 °C (77 °F)	Five years at 25 °C (77 °F)
Operating Temperature Range*	-40 °C to +65 °C (-40 °F to +149 °F)	-40 °C to +65 °C (-40 °F to +149 °F)

*Although designed to operate without damage within the temperature ranges shown, life expectancy is reduced at high temperatures (see warranty).

Outline Drawings



Battery Discharge Data

Battery Discharge Amperes (Within 5%) for IR-30EC at 25°C (77°F)

Hours Reserve	Cutoff Voltage per Battery (Cutoff Voltage per Cell)				
	10.5V (1.75V)	10.8V (1.80V)	11.0V (1.84V)	11.3V (1.88V)	11.4V (1.90V)
1	18.5	17.84	17.35	16.46	16.13
3	7.73	7.63	7.43	7.09	6.93
5	5.05	4.98	4.86	4.63	4.53
8	3.38	3.34	3.25	3.10	3.02
10	2.78	2.75	2.67	2.53	2.48
15	1.85	1.80	1.63	1.61	1.60
20	1.49	1.47	1.43	1.33	1.32
24	1.26	1.24	1.21	1.14	1.11

Battery Discharge Wattage (Within 5%) for IR-30EC at 25°C (77°F)

Hours Reserve	Cutoff Voltage per Battery (Cutoff Voltage per Cell)				
	10.5V (1.75V)	10.8V (1.80V)	11.0V (1.84V)	11.3V (1.88V)	11.4V (1.90V)
1	214.9	211.8	206.7	197.4	193.3
3	92.8	91.6	89.6	85.6	83.8
5	60.8	60.0	58.7	56.2	55.0
8	40.7	40.2	39.3	37.5	36.7
10	33.4	33.1	32.2	31.4	31.1
15	23.5	23.3	22.5	22.0	21.6
20	18.0	17.7	17.3	16.4	16.0
24	15.2	15.0	14.6	13.8	13.5

Battery Discharge Data (continued)

Battery Discharge Amperes (Within 5%) for IR-40EC at 25°C (77°F)

Hours Reserve	Cutoff Voltage per Battery (Cutoff Voltage per Cell)				
	10.5V (1.75V)	10.8V (1.80V)	11.0V (1.84V)	11.3V (1.88V)	11.4V (1.90V)
1*	24.2	23.8	23.1	22.2	21.5
3*	10.1	10.0	9.7	9.3	9.0
5	6.7	6.6	6.4	6.1	5.9
8	4.4	4.4	4.2	4.0	3.9
10	3.6	3.6	3.5	3.3	3.2
15	2.5	2.5	2.4	2.3	2.2
20	1.9	1.9	1.8	1.7	1.7
24	1.6	1.6	1.5	1.5	1.4

Battery Discharge Wattage (Within 5%) for IR-40EC at 25°C (77°F)

Hours Reserve	Cutoff Voltage per Battery (Cutoff Voltage per Cell)				
	10.5V (1.75V)	10.8V (1.80V)	11.0V (1.84V)	11.3V (1.88V)	11.4V (1.90V)
1*	286.6	282.4	275.7	265.1	257.8
3*	121.7	120.2	116.6	112.3	109.2
5	80.1	79.1	76.8	73.7	71.5
8	53.2	52.7	51.1	48.9	47.4
10	43.6	43.1	41.8	40.1	38.8
15	30.0	29.7	28.8	27.5	26.6
20	23.3	22.8	22.1	21.1	20.4
24	19.4	19.2	18.6	17.8	17.2

*The IR Series I battery is optimized for long-duration discharges. Loads exceeding the 5-hour rate may require the optional, non-standard, heavy-duty cable assembly (see accessories ordering information).

Warranty Information*

Battery Discharge Amperes (Within 5%) for IR-40EC at 25°C (77°F)

Warranted Years of Life Portion	Annual Average of Daily Max. Battery Temp.	Portion Full Replacement	Pro-Rata Replacement Portion
5 years	25 °C (77 °F)	2 years	3 years
3 years	32 °C (90 °F)	1 year	2 years
1 year	43 °C (110 °F)	6 months	6 months
0 years	50 °C (122 °F)	0 years	1 month

*For complete warranty information, please contact your Lineage Power sales representative.

Ordering Information

Individual Batteries and Accessories

Model Number	Description	Comcode
IR-30EC Battery	12 V, 25 Ah battery with standard 14 AWG lead assembly terminating with 350537-6 (AMP) contacts and a 1-480698-0 (AMP) two term plug	407928761
IR-30EC Battery with Heavy Cable	12 V, 25 Ah battery with 847397436 10 AWG heavy cable with four term plug.	407976182*
IR-40EC Battery	12 V, 34 Ah battery with standard 14 AWG lead assembly terminating with 350537-6 (AMP) contacts and a 1-480698-0 (AMP) two term plug	407928753
IR-40EC Battery with Heavy Cable	12 V, 34 Ah battery with 847397436 heavy cable with four term plug	407976190*
Interbattery Bus Bar	Interbattery bus bar to connect IR-30EC and IR-40EC batteries within a string	846861664

*Specifically designed for J85504D-1 List 1 or List 2 battery trays but may be suitable for other applications as well.

J85504D-1 Battery Tray

Description	List No.	Comcode
Shelf for mounting two strings of IR-30EC batteries in a framework with 22.32 in. mounting centers with output power fuses, IRU connections, and battery voltage jacks (Configured for FPS and CPS applications.)	L-1	601425481
Shelf for mounting two strings of IR-40EC batteries in a framework with 22.32 in. mounting centers with output power fuses, IRU connections, and battery voltage jacks (Configured for FPS and CPS applications.)	L-2	601425499
Tray for mounting two strings of IR-30EC batteries in a framework with 22.32 in. mounting centers.	L-11	601803638
Tray for mounting two strings of IR-40EC batteries in a framework with 22.32 in. mounting centers.	L-12	601803646

Related Product Literature

Document Title	Document Number
12IR150 and 12IR150LP Batteries	DS03-088
Unigy II* Series Batteries	DS03-053
Round Cell Batteries	DS03-052

*Unigy II is a registered trademark of East Penn Manufacturing Co., Inc.

LINEAGE POWER

World Wide Headquarters
3000 Skyline Drive, Mesquite, TX 75149, USA

+1-800-843-1797
Outside U.S.A.: +1-972-284-2626

<http://www.lineagepower.com>
e-mail: techsupport1@lineagepower.com

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