EVENLITE
LIVES DEPEND ON US

Project Name:	Approved By:
Catalog No:	Type No:

LiteMinder LMi

Central Emergency Lighting Power Inverter System

SMALLER. SAFER. SMARTER.

From research-driven innovation comes a new standard in life safety power.

Driven by deep research and purpose-built engineering, the LiteMinder® LMi sets a new standard in life safety power systems. As the first dedicated emergency lighting central inverter engineered from the ground up around a proprietary Lithium Iron Phosphate ($LiFePO_4$) battery platform and fully integrated Battery Management System (BMS), the LMi brings the inherent safety, longevity, and performance advantages of $LiFePO_4$ technology to emergency lighting in an entirely new way.

At its core, inherently stable $LiFePO_4$ chemistry is combined with intelligent BMS control that continuously monitors, balances, and protects individual cells. This integrated battery architecture optimizes safety, performance, and battery life while providing the stability and predictability demanded of critical life safety systems.

The LMi's compact, high-density design significantly reduces system size while maximizing installation flexibility and valuable electrical room space. Combined with an extended service life of 10–15 years and a wide operating temperature range, the LMi delivers long-term resilience with reduced maintenance and lower total cost of ownership.

Purpose-built for reliability when it matters most, the LiteMinder® LMi sets a new benchmark for modern life safety systems.

WHY LMi?

Smaller - Compact, high-density design enables flexible wall mounting, frees floor space, and supports distributed system layouts.

Safer - Inherently stable $LiFePO_4$ chemistry, enhanced by intelligent BMS control for protection, performance, and longevity with 7 Year Full Battery Warranty.

Smarter - Integrated system intelligence with advanced diagnostics, monitoring, and control for optimized performance.

FEATURES

- UL 924 compliant automatic Self-Test and Self-Diagnostics
- Programmable monthly and annual emergency tests
- Real-time clock with battery backup
- Advanced startup diagnostics to prevent miswiring and configuration errors upon initial bootup sequence
- Adaptive load monitoring with programmable load reduction thresholds
- User-adjustable transfer times for lighting control compatibility
- Automatic logging of alarms, events, and test results (up to 1,000 records per category) for ease of system status verification and compliance review

ADVANCED BATTERY ARCHITECTURE

- Proprietary Lithium Iron Phosphate ($LiFePO_4$) Chemistry Selected for its inherent chemical stability, resistance to thermal runaway, long cycle life, and suitability for life safety applications.
- Prismatic Cell Construction with Compression Management: Prismatic cells are maintained under constant mechanical compression to prevent swelling, preserve internal contact integrity, and ensure consistent performance over thousands of cycles.
- Proprietary Battery Management System (BMS): Provides active cell balancing, individual cell temperature monitoring, over- voltage and under-voltage protection, DC pre-charge, controlled disconnect, and integrated fusing.
- Layered Safety Design: High-current DC posts, controlled communication interfaces, and proprietary lockout mechanisms create a multi-layer protection strategy, representing one of the safest lithium battery implementations available in an emergency lighting inverter.

INDUSTRY-LEADING EFFICIENCY

- Ultra-High Standby Efficiency: Achieves 99.7% standby efficiency (<3W), dramatically reducing continuous energy consumption during normal operation.
- High Emergency Conversion Efficiency: Delivers 91% inverter efficiency during emergency operation, minimizing energy loss and thermal output.
- Ideal for Sustainable Buildings: Reduced heat generation lowers HVAC burden in electrical rooms and supports energy-efficient building designs while extending component service life.

INDUSTRY-LEADING EFFICIENCY *CONTINUED*

- Passthrough Rating: 24A maximum, 2,400W maximum at either 120V or 277V, when used with option 4FD Four Zone 0–10V Dimming Module.
- Input Protection: 30A input circuit breaker standard; optional supervised breaker (-TA).

QUICK SPECS

- **Operating Temperature Range:** 5°C - 40°C (41° - 104°F)
- **Warranty:** Electronics & Assembly 3 Years, Battery 7 Years Full.
- **Standard Self Testing, Self-Diagnostics:** Programmable schedule and features, with record keeping logs
- **Interactive Encoder and Display:** User Interface provides access to all features of the system including Meter Measurements, Alarms, Test Logs, Alarm Logs, Event Logs, User Settings, System Settings, and System Information
- Input Voltage: 120/277 VAC, Field Selectable
- Output Voltage: 120/277 VAC, (follows input selection)
- Output Types: Normally-On, Multipurpose Normally-Off/ Switched
- Output Power:
  - LMi-500: 500W
  - LMi-600: 600W
  - LMi-750: 750W
  - LMi-900: 900W
  - LMi-1000: 1000W
  - LMi-1200: 1200W
- **Max Connected Pass Through Load:** 2,400W, at either 120V or 277V, when used with option 4FD Four Zone 0–10V dimming module
- Overload Capability: Up To 110% (overload set point)
- Load Power Factor 0.5 lead to 0.5 lag
- Crest Factor: 4X on all models
- Frequency Regulation: 60Hz +/- 0.02 Hz crystal controlled during emergency
- Load Types: LED, Fluorescent, Tungsten/Quartz, Incandescent (Not HID compatible)
- Transfer Time: User Selectable 50ms / 250ms / 1S / 2S / 5S
- Operating Temperature: 20 - 30°C (per UL924 Specifications)
- Battery Type: Proprietary Lithium Iron Phosphate $LiFePO_4$ chemistry
- Emergency Runtime: 90 minutes at full rated load / 120 minute models available (see ordering guide).

MMI (MAN–MACHINE INTERFACE)

- Evenlite-Engineered Interface: Purpose-designed MMI optimized for life safety applications, providing clarity, depth of information, and intuitive operation.
- Display & Controls:
  - 4×20 backlit LCD display
  - Rotary Dial for menu navigation
  - Dedicated system test pushbutton
  - System Awareness: Heads-up LEDs provide instant visual indication of AC present, charging status, inverter operation, alarms, and switched outputs.
- Comprehensive Diagnostics: Direct access to electrical measurements, battery parameters, system runtime, inverter minutes, and historical event logs supports serviceability, compliance, and long-term system management.
- Alarm Management: Audible alarm with silence function and automatic ring-back ensures critical conditions are not overlooked.

SYSTEM ALARMS

- User-Configurable Alarms: Load reduction, low/near-low battery, high temperature, high/low input voltage, utility failure, circuit breaker trip
- Protective Alarms: Overload, overload shutdown, inverter fault, charger fault, DC pack fault, startup and wiring verification faults

OPTIONS

- Output Breakers:
  - Up to 6 unsupervised or 4 supervised (-TA) 20A breakers
  - Normally-On (C) or Switched (S) configurations
  - 1 Summary/2 Programmable Terminal Block (-TB)
- 4-Zone Output Option (-4FD):
  - Four independent switched outputs
  - Integrated 0–10V / DALI interface
  - Summary alarm dry contacts
  - Fire alarm interface (12/24V AC/DC)
- Seismic OSHPD approved (-Z4)
- Wall mount bracket (-WM)
- Ship less battery (-UP)

BATTERY SYSTEM

- Battery Technology: Proprietary Lithium Iron Phosphate ($LiFePO_4$)
- Operating Temperature: 5°C - 40°C (41° - 104°F)
- DC System Voltage: 12.8VDC/600W 19.2VDC/900W 25.6VDC/1200W
- DC Current:
  - 600W: 53 A
  - 900W: 53 A
  - 1200W: 53 A

BATTERY SYSTEM *CONTINUED*

- Charger BMS Controlled with advanced diagnostics, monitoring, and individual cell charge management and control for optimized performance
- Recharge Time 24 Hour Recharge Standard
- Protection Automatic Low Voltage Disconnect (LVD) set to 87.5% of nominal DC voltage. (Automatic restart upon utility return)
- Emergency Runtime: 90 minutes at full rated load / 120 minute models available (see ordering guide).

ELECTRICAL

- Pure Sine Wave Output: Crystal-controlled 60 Hz output with less than 3% THD ensures seamless compatibility with modern LED drivers, lighting controls, and electronic ballasts, minimizing flicker, audible noise, and component stress.
- Input
  - Voltage 120 or 277 VAC – User Selectable
  - Current 6.50A (120V), 2.82A (277V) for 600-Watt Model
  - 9.75A (120V), 4.22A (277V) for 900-Watt Model
  - 13.0A (120V), 5.63A (277V) for 1200-Watt Model
  - Frequency 60Hz +/- 2 Hz
  - Protection 30 Amp circuit breaker
  - Power Factor 0.5 lead to 0.5 lag
- Output
  - Voltage 120 or 277 VAC – User Selectable
  - Current 5.00A (120V), 2.17A (277V) for 600-Watt Model
    7.50A (120V), 3.25A (277V) for 900-Watt Mode
    10.0A (120V), 4.33A (277V) for 1200-Watt Model
  - Frequency 60Hz +/- 0.02 Hz crystal controlled during emergency
  - Overload Up To 110% (overload set point)
  - Transfer Time 50ms, 250ms, 1s, 2s, 5s User programmable
  - Output Distortion Less than 3% THD
  - Crest Factor 4X on all models
  - Load Power Factor 0.5 lead to 0.5 lag
  - Output Types Normally-On, Multipurpose Normally-Off/ Switched
  - Output Breakers
  - Load Power Factor: Supports 0.5 lag to 0.5 lead, accommodating a wide range of lighting technologies.
  - High Inrush & Overload Capability: Engineered to support demanding LED startup currents:
    - 4,800W for 250 ms
  - 110% for 30 minutes
  - Soft Start Transfer: Ramped sine wave output upon emergency transfer reduces inrush current, improving luminaire reliability and wiring longevity.

CONSTRUCTION

- Enclosure: 16-gauge powder-coated cold-rolled steel
- Dimensions: 22" W × 22.3" H × 8" D
- Weight:
  - LMi-600: 108 lbs
  - LMi-900: 115 lbs
  - LMi-1200: 118 lbs
- Mounting: Wall mount provisions standard (wall bracket optional – option WM)
- Optional Seismic Restraints using the option -Z4
- Knockouts: Dual 7/8" and 1-1/8" Conduit EKOs on top and sides
- Sound Levels:
  - Standby: 35 dBA @ 1 meter
  - Emergency: 45 dBA @ 1 meter
- Serviceability: Front access panel allows access to breakers and controls without removing the full enclosure cover.
- Manufacturing: Designed and Manufactured in the USA
- Quality Assurance: 100% load tested and burn-in tested prior to shipment

CERTIFICATION & COMPLIANCE

- UL 924 – Emergency Lighting and Power Equipment
- UL 2054 – Lithium Battery Safety
- Plenum U.L. Certified and Approved to UL2043
- CEC Title 20
- UN3480 Compliance for lithium shipping and storage
- UN 38.3 for Lithium Battery Safety Compliance

WARRANTY

- LFP $LiFePO_4$ have a 7-year Full warranty - view complete warranty terms online at www.evenlite.com/terms-warranty.
- Electronics are warranted for 3 years as standard. Electronics coverage may be extended to 5 years with the purchase of Factory Phone Startup (option PS). A 10 year extended electronics warranty is also available with the purchase of the EW warranty option. The 10 year extended warranty requires Factory Phone Startup (option PS). For complete warranty details, please refer to the Central Power Systems Warranty.

ORDERING GUIDE

Ordering Example: LMi-1200-LFP-C2-S2-TA-TB-WM

MODEL	WATTAGE / VA	BATTERY TYPE
LMi	**90 MINUTE RUNTIME**	**LFP** $LiFePO_4$
	600 600VA	**UP** Ship Inverter Less Batteries
	900 900VA	
	1200 1200VA	
	2 HOUR RUNTIME	
	500 500VA	
	750 750VA	
	1000 1000VA	
LMi		

AVAILABLE BREAKER CONFIGURATIONS[1]

BREAKER TYPE	QTY	REQUIRED OPTIONS	OPTION DESCRIPTION
(BLANK) Terminal Block Output[2]		*(BLANK)*	No Breaker Configurations
		-TB-FA	Form C Dry Contact 1 Summary/2 Programmable, Fire Alarm
C(n) 20A Normally On	*(**n** = 1–6)*	*(BLANK)*	No Breaker Configurations
	*(**n** = 1–6)*	**-TB-FA**	Form C Dry Contact 1 Summary/2 Programmable, Fire Alarm
	*(**n** = 1–4)*	**-TB-FA-TA**	Trip Alarm, Form C Dry Contact 1 Summary/2 Programmable, Fire Alarm Input
S(n) 20A Switched/ Normally Off	*(**n** = 1–6)*	*(BLANK)*	(n) Switch Breakers, Single Zone Control
	*(**n** = 1–6)*	**-TB-FA**	Form C Dry Contact 1 Summary/2 Programmable, Fire Alarm
	*(**n** = 1–4)*	**-TB-FA-TA**	Trip Alarm, Form C Dry Contact 1 Summary/2 Programmable, Fire Alarm Input
SD(n) 20A Independently Switched[3]	*(**n** = 1–4)*	*(BLANK)*	No Breaker Configurations
	*(**n** = 1–4)*	**-4FD-TB-FA**	4x Zone Independent Dimming, Form C Dry Contact 1 Summary/ 2 Programmable, Fire Alarm Input
	*(**n** = 1–4)*	**-4FD-TB-FA-TA**	4x Zone Independent Dimming, Form C Dry Contact 1 Summary/ 2 Programmable, Fire Alarm Input, Trip Alarm

OPTIONS

Z4	Seismic Zone 4 Certified	**TB**	Form C Dry Contact 1 Summary/2 Programmable
WM	Wall Mount Kit	**FA**	Fire Alarm
PS	Phone Startup Commissioning	**TA**	Trip Alarm
EW	10 Year Extended Electronics Warranty[4]	**4FD**	4x Zone Independent Dimming
RT	Remote Test Switch with LED Diagnostics		
KAFC	65KAIC, Full Coordination Input/Output[5]		

OPTIONAL FACTORY DIMMING (w/ FD)

(BLANK)	Factory Present 100%
OUTPUT 1	11=80%, 12=60%, 13=40%, 14I=20%
OUTPUT 2	21=80%, 22=60%, 23=40%, 24=20%
OUTPUT 3	31=80%, 32=60%, 33=40%, 34=40%
OUTPUT 4	41=80%, 42=60%, 43=40%, 44=40%

ORDERING NOTES

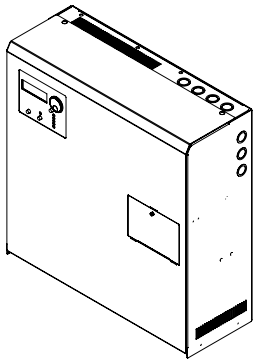
1 (n) is quantity of breakers required.
2 Provided with 1x Normally On, and 1x configurable, switched or Normally Off output terminals
3 SD (Independently Switched Output Breakers) have a dedicated Switch Command per Breaker.
4 Requires PS (Phone Startup Commissioning)
5 KAFC does not support TA option. Full coordination consists of 30A Input/15A Output UL Class CC Fuses mounted in an On/Off toggle switched housing with a fuse fault indicator. This feature replaces Circuit Breakers and provides system rating of 65KAIC.

Fill in fields from categories above and complete type and part number.

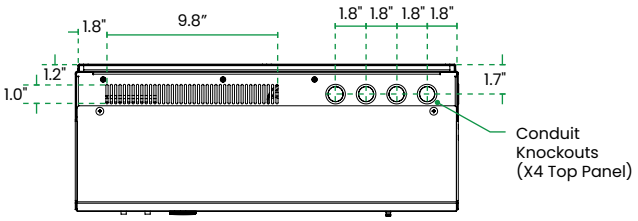
Type No:	Full Part No:

DIMENSIONS (CONTINUED)

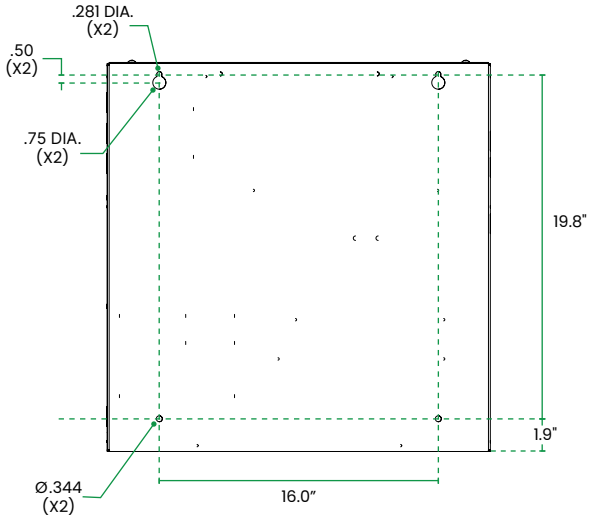
UNIT WALL MOUNT DETAILS



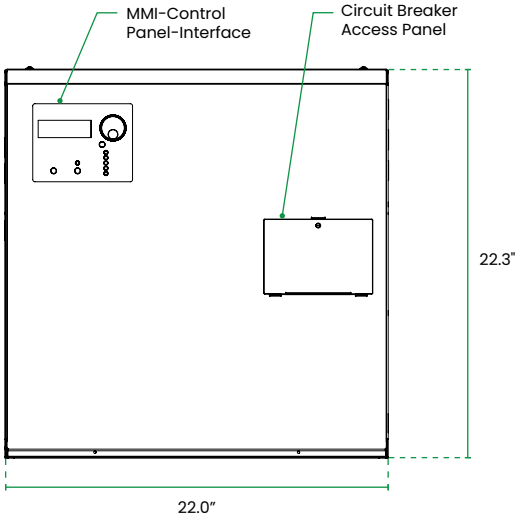
TOP PANEL VIEW



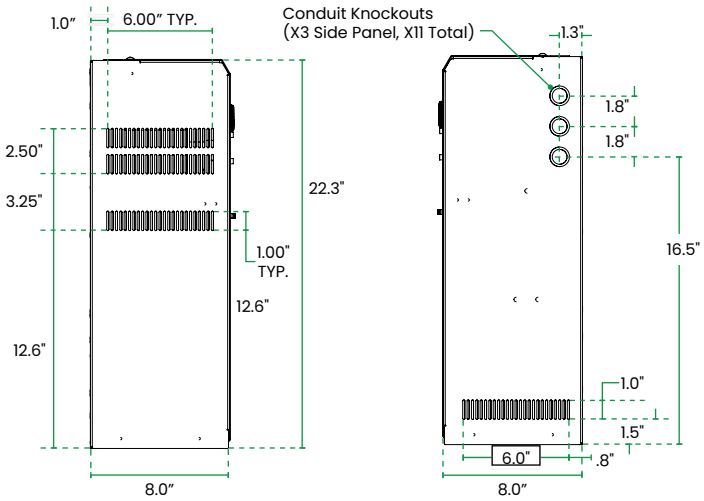
REAR PANEL VIEW (UNIT MOUTING PATTERN)



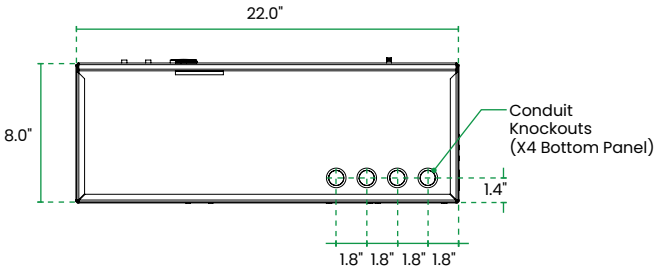
FRONT PANEL VIEW



SIDE PANEL VIEWS

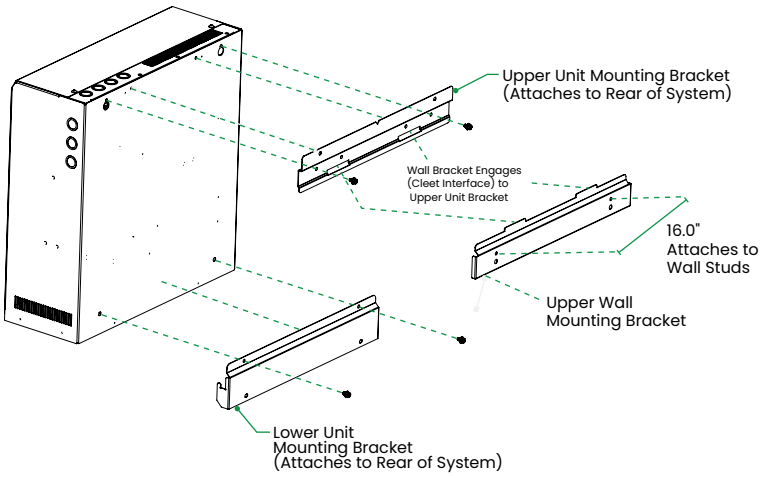


BOTTOM PANEL VIEW

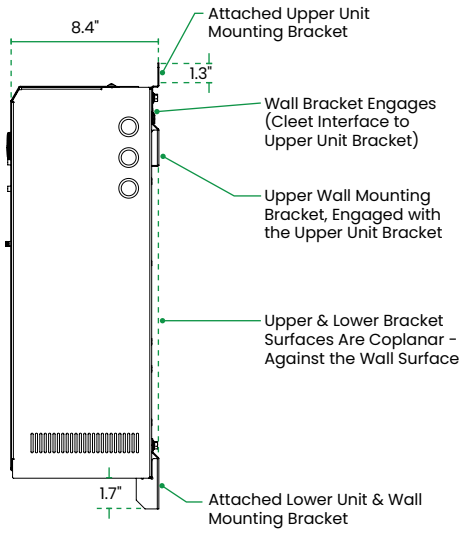


DIMENSIONS

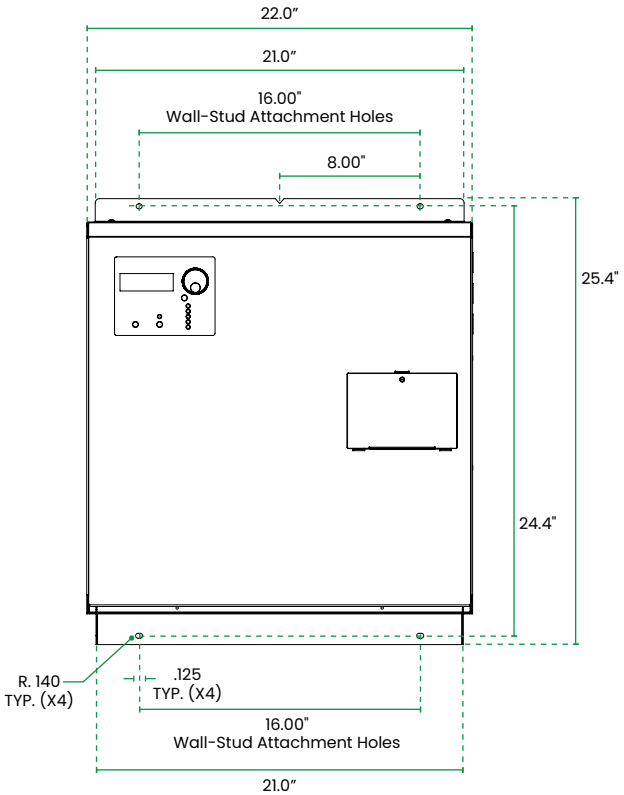
OPTIONAL WALL MOUNT DETAILS (-WM OPTION)



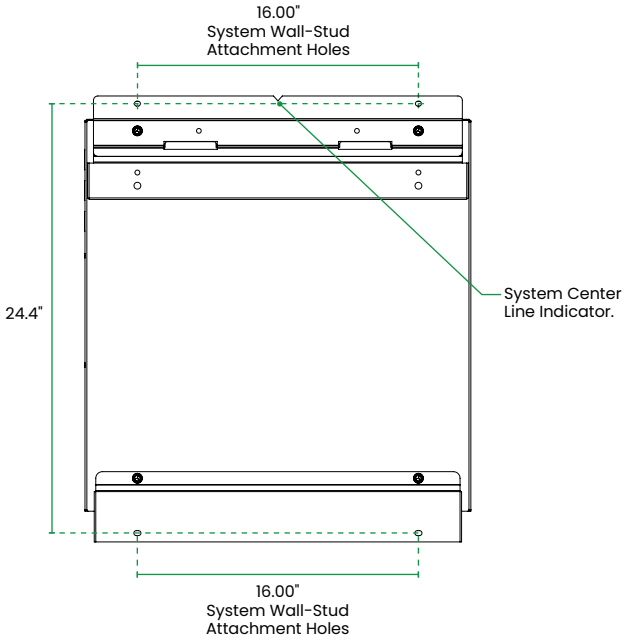
SIDE PANEL VIEW



FRONT PANEL VIEW



REAR PANEL VIEW (UNIT WITH WALL MOUNT KIT ATTACHED)



ELECTRICAL DATA

MODEL	EMERGENCY OUTPUT (W)	INPUT/OUTPUT VOLTAGE	OUTPUT CURRENT (A)	INPUT CURRENT (A)	BATTERY VOLTAGE	BATTERY CURRENT	RUNTIME (MINUTES)
MODELS BASED ON THE 600W UNIT WITH B410007 (12.8V/105AH)							
LMi-500	500	120/277	4.17/1.80	5.8/2.5	12.8	44	120
LMi-600	600	120/277	5.00/2.17	7.0/3.1	12.8	53	90
MODELS BASED ON THE 900W UNIT WITH B410006 (19.2V/105AH)							
LMi-750	750	120/277	6.25/2.70	8.8/3.8	19.2	44	120
LMi-900	900	120/277	7.5/3.25	10.5/4.6	19.2	53	90
MODELS BASED ON THE 1200W UNIT WITH B410005 (25.6V/105AH)							
LMi-1000	1000	120/277	8.33/3.60	11.7/5.1	25.6	44	120
LMi-1200	1200	120/277	10.00/4.33	14.2/6.0	25.6	53	90