

OUTLAST® LATENT HEAT SYSTEMS™ (LHS) LITHIUM-ION BATTERY SLEEVES



INFORMATION SHEET | September 2016 | Rev: 3

Outlast® LHS Lithium-Ion Battery Sleeves provide a low-cost, effective means for passive thermal management. Outlast battery sleeves provide effective thermal moderation during power intensive battery operation due to the unique energy absorption, heat storage and heat dissipation characteristics. These materials are designed for thermal protection and stabilization of electronic devices utilizing single and multi-cell 18650 Li-ion batteries.

Outlast LHS Battery Sleeves have been specifically engineered to meet critical thermal management needs for portable devices utilizing cylindrical format Li-ion cells by:

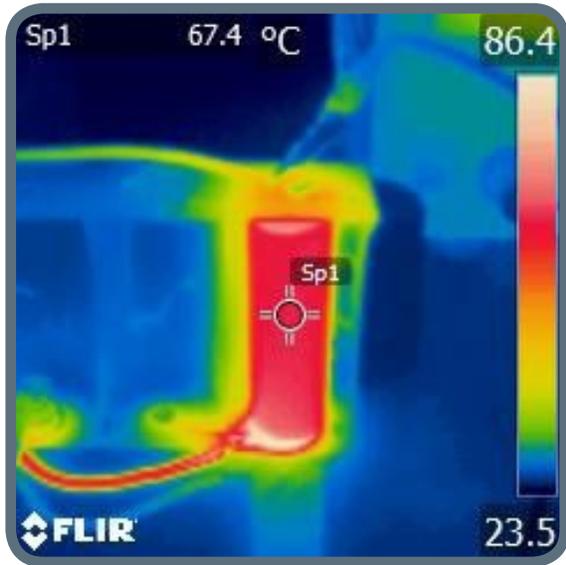
- Moderating cell and pack temperatures during charge and discharge operation in order to lower thermal runaway issues and improve safer user handling.
- Decrease in overall thermal stress of cells and packs, which can lead to significant degradation in battery function and life.
- Increases the ambient operating temperature range of cells and packs by mitigating hot and cold temperature fluctuations induced by the working environment (i.e. arctic and desert type applications).
- Sleeves can be sized to fit different cell dimensions (i.e. 18650, 19670, 26650).

OUTLAST® LHS BATTERY SLEEVES: TYPICAL PROPERTIES

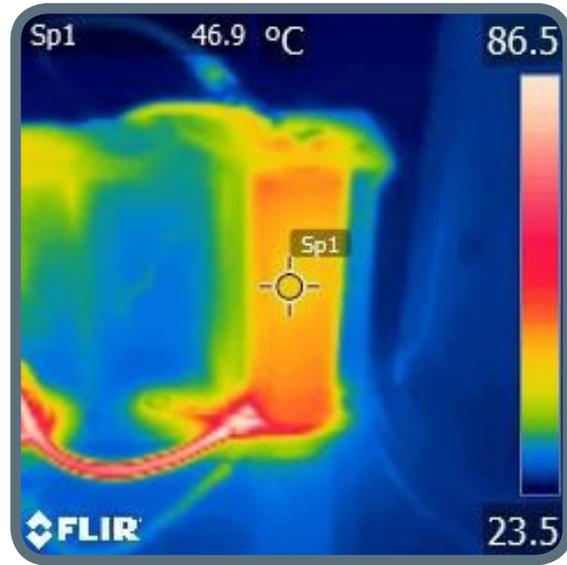
Sleeve Type	Cylindrical
Color	White
Wall Thickness (mm).....	2.15
Outer Diameter (mm).....	22.15
Inner Diameter (mm)	17.85
Length (mm)	65
Phase Transition Temp (°C):.....	42-43
Latent Heat (J/g).....	115-120
RoHS	Compliant



Latent Heat Systems (LHS) Lithium-ion Battery Sleeves



Control



With Latent Heat Storage (LHS) Lithium-ion Battery Sleeve

PRODUCT DETAILS

SUPPLIER: Outlast Technologies LLC

PRODUCT: PCM-based external battery sleeve.

END-USE: Thermal management for single/multi-cell 18650 Li-ion batteries packs.

STORAGE: Store in cool, dry place. Best if used within 12 months

APPLICATION: Firmly press battery into sleeve making sure there is no air gaps between inner surface of the sleeve and outer surface of the battery. Take care not to damage the battery casing.



Note: Outlast® thermal management materials are developmental products that are furnished for R&D purposes only. The information contained herein is merely preliminary data due to continued development. Further information, including data changes, may occur as testing, process optimization, and formulation changes occur and development proceeds. The user/purchaser agrees that: use is undertaken at the users sole risk, that the material is furnished “asis, with all faults”, without any warranty or guarantee; and that Outlast Technologies LLC, Outlast Europe, or Outlast Asia shall not be liable for any damages, of whatever nature, arising out of the user’s / purchaser’s receipt and/or use of this material. Commercialization and continued supply are not assured.

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