LifePort®
Kidney Transporter

Flying LifePort Kidney Transporter (LKT) in Cabin of Commercial Aircraft

Checklist

Documents to accompany LKT

1. OPTN Identifiers
2. Copy of itinerary
3. Contact numbers for OPO and ORS 24/7 Perfusion Helpline number
4. Copy of TSA contact email from both airports
5. LKT battery specifications

Prior to Arriving at Outbound Airport

- [ ] Understand basic LKT troubleshooting
- [ ] Call preferred airline to purchase two tickets next to each other for outgoing flight, preferably a middle and window seat; options include but are not limited to:
  - [ ] American Airlines Special Assistance, 800-237-7976
  - [ ] Delta Airlines Accessible Travel Services, 404-209-3434
  - [ ] Southwest Airlines, Customer Service, 800-435-9792
- [ ] Contact TSA via email to provide information about the perfusion case (itinerary, Unique Donor ID, OPO name, and OPO phone number) and obtain a local TSA point of contact for both airports. Print emails and add to required documents
- [ ] Swap LKTs if necessary
- [ ] Ensure LKT has adequate ice prior to leaving OPO
- [ ] Make sure LKT batteries are charged
- [ ] Consider bringing cart or Travel Bag with LKT to airport
- [ ] Silence LKT alerts by turning Audible Alert Switch to “O” with a flathead screwdriver
- [ ] Arrange transportation upon landing to receiving transplant hospital, if needed

At Outbound Airport

- [ ] If not done previously, purchase two airline tickets next to each other for outgoing flight, preferably a middle and window seat

  NOTE: *During the transition phase following the publication of FAA Organ Transport Work Group Final Report, different airports may require you to visit the airline ticket counter before proceeding to the TSA Checkpoint to verify organ transport documentation*

- [ ] Bring LKT to airline ticket counter to verify documentation
  - [ ] Present paperwork on LKT, Batteries, and email communication with TSA as needed
  - [ ] Obtain boarding pass
- [ ] Proceed to TSA Checkpoint for screening
  - [ ] Present paperwork on LKT, Batteries, and email communication with TSA as needed
  - [ ] Send LKT through x-ray, if required. If any issues arise, request to speak to TSA Point of Contact

24/7 Perfusion Helpline: 1.866.682.4800
organ-recovery.com

Organ Recovery systems

LifePort®
Kidney Transporter

At Gate and on Outbound Plane

- [ ] Notify gate counter personnel of organ transport and potential MEDEVAC status to ensure flight priority in takeoff and landing. Request preboarding and gate check Travel Bag or cart if necessary
- [ ] Secure LKT in second seat and notate time of boarding
- [ ] Verify with crew of organ transport and potential MEDEVAC status and request priority deplaning
- [ ] Purchase WiFi to be able to communicate with courier company or OPO, who may need to call ORS 24/7 Perfusion Helpline if any issues arise

Resources

Federal Aviation Administration (FAA) Transportation of Organs on Commercial Airlines
https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs200/organ_transport

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Kidney Transporter

LifePort Kidney Transporter
Device Components

1. Outer Display Panel
2. Audible Alert Switch, Data Cable input, Circuit Breakers, Power Cable input
3. Battery Compartment

24/7 Perfusion Helpline: 1.866.682.4800
organ-recovery.com

Organ Recovery systems

Specifications, Precautions, Limitations

Product Specifications

Description	Portable, self-contained renal preservation system, which utilizes hypothermic perfusion.
Indications for Use	LifePort Kidney Transporter is intended to be used for the continuous hypothermic machine perfusion of kidneys for the preservation, optional transportation and eventual transplantation into a recipient.
Capacity	Single kidney
Power Source	AC or battery Voltage – 100 to 240 VAC, Frequency – 50 to 60 Hz, Current – 1 Amp
Coolant Source	Ice/water bath, 5-1/2 Liters
Perfusate Pump	Peristaltic pump
Pressure Control	Closed loop pressure regulation, 10 to 65 mmHg
Perfusion Modes	Pulsatile
Flow Rates Measurement	Between 20 mL/min to 150 mL/min, accuracy is ±15%
Dimensions	24” x 14.5” x 14.25” (61.96cm x 36.83cm x 36.195cm)
Approximate Weight	45 lbs (20.4 kg) fully loaded
Transport Duration	Up to 24 hours between ice replenishment and battery replacement (or recharge)
Batteries	Four x 11.1 V lithium-ion batteries
Battery Life	24 hours (fully charged)
Perfusate Used	Hypothermic machine perfusate
Data Download	USB data download of all perfusion and status data collected since the point when the INFUSE state was begun following Power ON.
Storage Conditions	Temperature: 5°C to 40°C
Operating Conditions	Not to exceed 35°C on AC mains Not to exceed 40°C on battery

Device Classifications

Medical Device	Class II	FDA listed device
	Class IIa	EU MDD 93/42/EEC
Type of protection from electric shock	Class I / Internally Powered	
Protection from water ingress	IPX1	LifePort Kidney Transporter is protected from vertical water droplets.
Cleaning recommendations	LifePort Kidney Transporter can be cleaned with a 70% isopropanol solution to remove perfusate residue and other detritus.	

Equipment is suitable for Continuous Operation.

WARNING: Equipment is **NOT** suitable for use in the presence of a **FLAMMABLE ANESTHETICS** or **NITROUS OXIDE**, without proper safety precautions per hospital or organization guidelines or procedures.

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LITHIUM ION RECHARGEABLE BATTERY PACK UN IATA 38.3 CERTIFICATE

Manufacturer:
National Power Corporation
4330 W. Belmont Ave.
Chicago, IL. 60641
Telephone: +773-685-2662 Fax: +773-685-8316

Product:
Lithium-Ion Rechargeable Battery Pack Specification

MODEL: ORS188021BLISCR		
Item	**Value**	**Comments**
Nominal Voltage	3.7	
Battery Pack (mAh)	3760	
Battery Pack (Wh)	14	
Configuration	1S-2P	
Product Category	N/A	Lithium – Ion Rechargeable Battery Pack
Chemical System	N/A	Lithium – Ion
Appearance	N/A	Soft Battery Pack

IATA T1 – T8 CERTIFICATE

BATTERY PACK TEST FILE NUMBER: 40234			
Test and Criteria (UN38.3 LITHIUM – ION BATTERY)		**Test Results**	**Comments**
No.	**Test Procedure**		
T1	Altitude Stimulation	Pass	
T2	Thermal Test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External Short Circuit	Pass	
T6	Impact		For Cell Only
T7	Overcharge	Pass	
T8	Forced Discharge		For Cell Only

According to the requirements of UN/DOT 38.3, lithium cells and batteries are subject to as many as eight separate tests designed to assess their ability to withstand the anticipated rigors incurred during transport.
We, National Power Corporation, certify the model listed in this document complies with T1 to T8 test as required.

National Power Corporation
Engineering Department

MMedinaRivera 6/27/17

Mauricio Medina, Engineering Manager
National Power Corporation
改善 Kaizen - It's the Way We Work

09/19/2012
Report Date

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LITHIUM ION RECHARGEABLE BATTERY PACK UN IATA 38.3 CERTIFICATE

Manufacturer:
National Power Corporation
4330 W. Belmont Ave.
Chicago, IL. 60641
Telephone: +773-685-2662 Fax: +773-685-8316

Product:
Lithium-Ion Rechargeable Battery Pack Specification

MODEL: 23595-001 (2SA07A96)		
Item	**Value**	**Comments**
Nominal Voltage	11.1	
Battery Pack (mAh)	4200	
Battery Pack (Wh)	47	
Configuration	3S-2P	
Product Category	N/A	Lithium – Ion Rechargeable Battery Pack
Chemical System	N/A	Lithium – Ion
Appearance	N/A	Battery Pack in Plastic Enclosure

IATA T1 – T8 CERTIFICATE

BATTERY PACK TEST FILE NUMBER: U-050905			
Test and Criteria (UN38.3 LITHIUM – ION BATTERY)		**Test Results**	**Comments**
No.	**Test Procedure**		
T1	Altitude Stimulation	Pass	
T2	Thermal Test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External Short Circuit	Pass	
T6	Impact		For Cell Only
T7	Overcharge	Pass	
T8	Forced Discharge		For Cell Only

According to the requirements of UN/DOT 38.3, lithium cells and batteries are subject to as many as eight separate tests designed to assess their ability to withstand the anticipated rigors incurred during transport.
We, National Power Corporation, certify the model listed in this document complies with T1 to T8 test as required.

National Power Corporation
Engineering Department

MMedina Rivera 6/27/17

Mauricio Medina, Engineering Manager
National Power Corporation
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05/09/2005

Report Date

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UN 38.3 LITHIUM BATTERY TEST SUMMARY

Manufacturer's contact information							
Name:	National Power Corporation						
Address:	4330 W. Belmont Ave						
City:	Chicago	**State:**	IL	**ZIP:**	60641	**Country:**	USA
Telephone:	+773-685-2662	**Fax:**	+773-685-8316	**Website**	https://www.nationalpower.com/		

Test Laboratory							
Name:	National Technical Systems – Chicago						
Address:	1660 Wall St. Suite100						
City:	Mount Prospect	**State:**	IL	**ZIP:**	60056	**Country:**	USA
Telephone:	847-934-5300	**Fax:**	N/A	**Website**	www.nts.com		

Test Report	
Test report number:	PRO58734
Test report date:	10/05/2018

Battery Description					
Model/part number:	SM201 / 2SA10A79997BXCR		**Configuration:**	3S-2P	
Nominal voltage (V)	11.1	**Capacity (mAh):**	5000	**Watt-Hour (Wh):**	56
Battery chemistry:	Lithium – Ion	**Product category**	Lithium – Ion Rechargeable Battery Pack		
Battery weight (gr):	330	**Appearance:**	Battery Pack in plastic enclosure		

List of Tests Completed					
No.	**Test Procedure**	**Test Results**	**Comments**	***Reference to assembled battery testing requirements, if applicable (i.e., 38.3.3 (f) and 38.3.3 (g)).***	
T1	Altitude Stimulation	Pass			
T2	Thermal Test	Pass		N/A	
T3	Vibration	Pass			
T4	Shock	Pass			
T5	External Short Circuit	Pass		***Edition of UN Manual of Tests and Criteria Used***	
T6	Impact		For Cell Only	Revision 6	
T7	Overcharge	Pass			
T8	Forced Discharge		For Cell Only		

According to the requirements of UN/DOT 38.3, lithium cells and batteries are subject to as many as eight separate tests designed to assess their ability to withstand the anticipated rigors incurred during transport.
We, National Power Corporation, certify the model listed in this document complies with T1 to T8 test as required.

National Power Corporation
Engineering Department

M Medina Rivas

Mauricio Medina, Engineering Manager
National Power Corporation
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06/06/2019
Date

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LITHIUM ION RECHARGEABLE BATTERY PACK UN IATA 38.3 CERTIFICATE

Manufacturer:
National Power Corporation
4330 W. Belmont Ave.
Chicago, IL. 60641
Telephone: +773-685-2662 Fax: +773-685-8316

Product:
Lithium-Ion Rechargeable Battery Pack Specification

MODEL: SM204 (3SA49A49)		
Item	**Value**	**Comments**
Nominal Voltage	11.1	
Battery Pack (mAh)	7500	
Battery Pack (Wh)	84	
Configuration	3S-3P	
Product Category	N/A	Lithium – Ion Rechargeable Battery Pack
Chemical System	N/A	Lithium – Ion
Appearance	N/A	Battery Pack in plastic enclosure

IATA T1 – T8 CERTIFICATE

BATTERY PACK TEST FILE NUMBER: TW1709033-001			
Test and Criteria (UN38.3 LITHIUM – ION BATTERY)		**Test Results**	**Comments**
No.	**Test Procedure**		
T1	Altitude Stimulation	Pass	
T2	Thermal Test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External Short Circuit	Pass	
T6	Impact		For Cell Only
T7	Overcharge	Pass	
T8	Forced Discharge		For Cell Only

According to the requirements of UN/DOT 38.3, lithium cells and batteries are subject to as many as eight separate tests designed to assess their ability to withstand the anticipated rigors incurred during transport.
We, National Power Corporation, certify the model listed in this document complies with T1 to T8 test as required.

National Power Corporation
Engineering Department

Mfedina Rivera 10-2-17

Mauricio Medina, Engineering Manager
National Power Corporation
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09/30/2017
Report Date

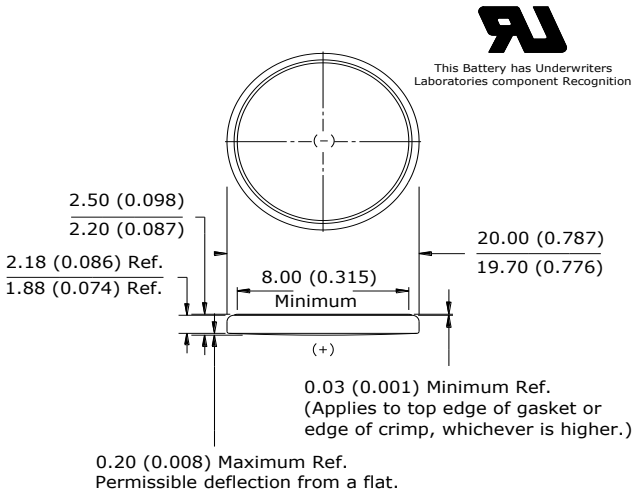
Energizer
1-800-383-7323 USA/CAN
www.energizer.com

ENERGIZER CR2025

Lithium Coin

Industry Standard Dimensions

mm (inches)



Specifications

Classification:	"Lithium Coin"
Chemical System:	Lithium / Manganese Dioxide (Li/MnO_2)
Designation:	ANSI / NEDA-5003LC, IEC-CR2025
Nominal Voltage:	3.0 Volts
Typical Capacity:	163 mAh (to 2.0 volts) (Rated at 15K ohms at 21°C)
Typical Weight:	2.6 grams (0.08 oz.)
Typical Volume:	0.8 cubic centimeters (0.05 cubic inch)
Max Rev Charge:	1 microampere
Energy Density:	176 milliwatt hr/g, 616 milliwatt hr/cc
Typical Li Content:	0.078 grams (0.0028 oz.)
UL Recognized:	MH29980
Operating Temp:	-30C to 60C
Self Discharge:	~1% / year

Safety: ⚠ WARNING

(1) KEEP OUT OF REACH OF CHILDREN. Swallowing may lead to serious injury or death in as little as 2 hours due to chemical burns and potential perforation of the esophagus. **Immediately see doctor; have doctor phone (202) 625-3333.**

(2) Battery compartment design. To prevent children from removing batteries, battery compartments should be designed with one of the following methods: a) a tool such as screwdriver or coin is required to open battery compartment or b) the battery compartment door/cover requires the application of a minimum of two independent and simultaneous movements of the securing mechanism to open by hand. Screws should remain captive with the battery door or cover.

Simulated Application test

Typical Performance at 21°C (70°F)

Schedule:	Typical Drains: at 2.9V (mA)	Load (ohms)	Cutoff 2.0V (hours)
Continuous	0.193	15,000	845

Internal Resistance Characteristics

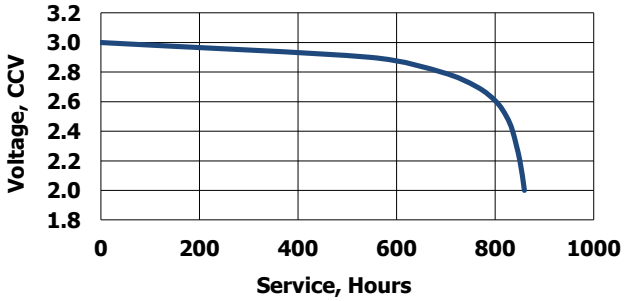
Pulse Test at 21°C (70°F)

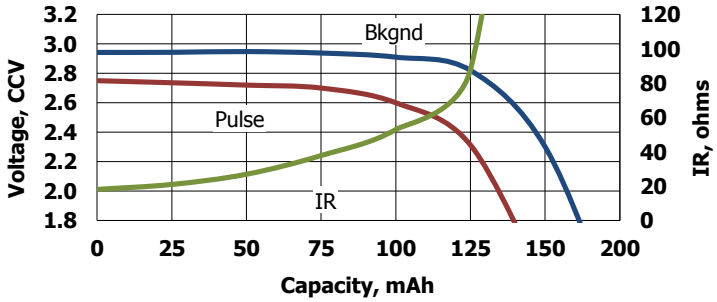
Bkgnd Drain: Continuous
15K ohms
0.193 mA @2.9V

Pulse Drain: 2 seconds X 12 times/day
400 ohms
6.8 mA @2.7V

Typical Discharge Characteristics

Load: 15K ohms - Continuous
Typical Drain @ 2.9V: 0.193 mA





Important Notice

This datasheet contains typical information specific to products manufactured at the time of its publication.