

科技驱动生活，绿色提升价值 --UL环境助力全球家电品牌引领绿色消费升级

2018年4月 成都



联系方式
陶宏亮 Leon Tao
Environmental Program Manager
leon.tao@ul.com
+86 20 3213 1049
+86 139 2428 9093

UL 概述——值得信赖的标志

UL成立于1894年，是全球知名的独立从事安全科学事业的公司。拥有逾120年引领行业进步的辉煌历史。

- 每年全球有超过220亿的UL标识出现各类商品上
- 在亚洲，欧洲以及北美信赖UL产品安全信息的消费者达到10亿
- UL现已颁布超过1500本标准。
- 在全球120多个国家并拥有68实验室，进行测试和认证业务的运营。



UL使命: “Working for a safer world since 1894”

家电产品合规风险



当今的资源难题- 线性经济的困境

Take



世界锂产量:吨



Make



全球液晶电视销售：百万单位



Waste



全球电子废物产生：百万吨



Sources: USGS (2017) <https://minerals.usgs.gov/minerals/pubs/historical-statistics/#lithium> Statista (2017) <https://www.statista.com/statistics/326947/lcd-sales-by-region/>, UNU E-waste Monitor (2017) <https://i.unu.edu/media/unu.edu/news/52624/UNU-1stGlobal-E-Waste-Monitor-2014-small.pdf>

当今企业可采取的行动

Take



Content / Sourcing 内容/来源:

- Recycled Content 回收材料 (including closed-loop)
- Byproduct Synergy 副产品协同效应
- Biobased 生物基材料
- Rapidly Renewable 快速再生
- Rebuilt 重新组装

Make



Design for Circularity 循环性设计:

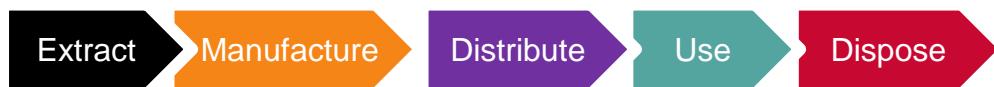
- Recyclability 可回收比例
- Biodegradability 生物可降解性
- Products as Service 以提供服务替代提供实际产品
- Product Life Extension 延长产品寿命

-Waste-



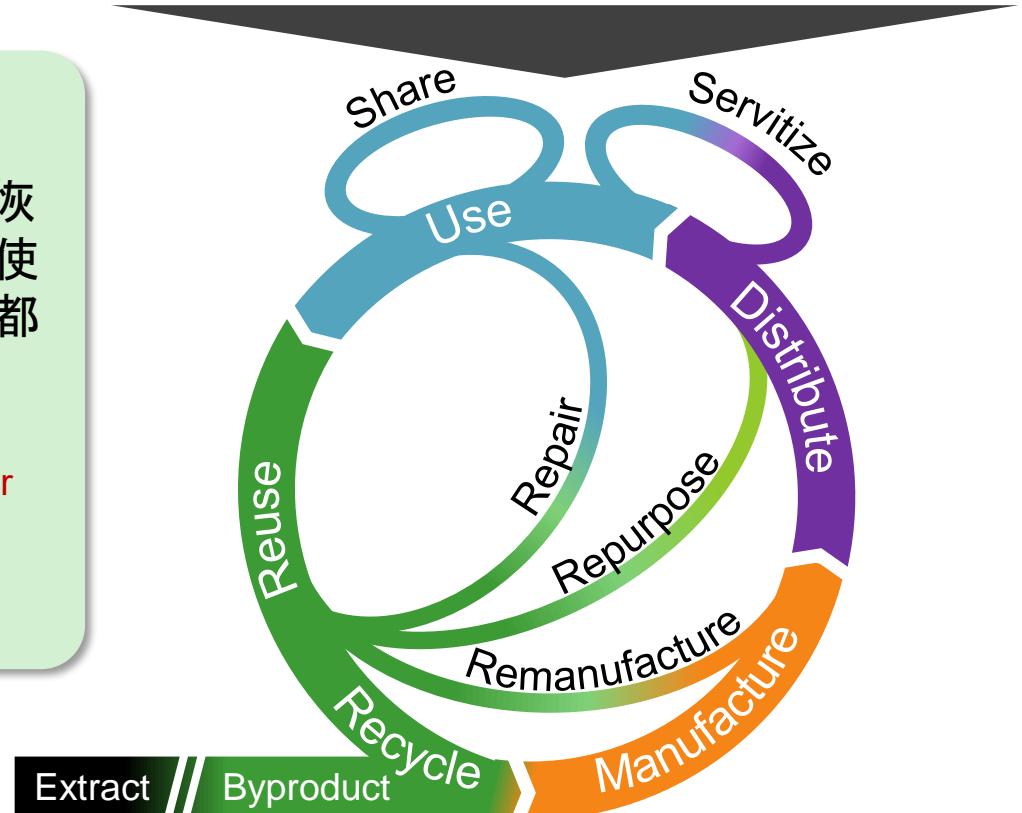
Waste Minimization & Diversion | Zero Waste to Landfill
减少废弃物产生 | 零填埋

循环经济



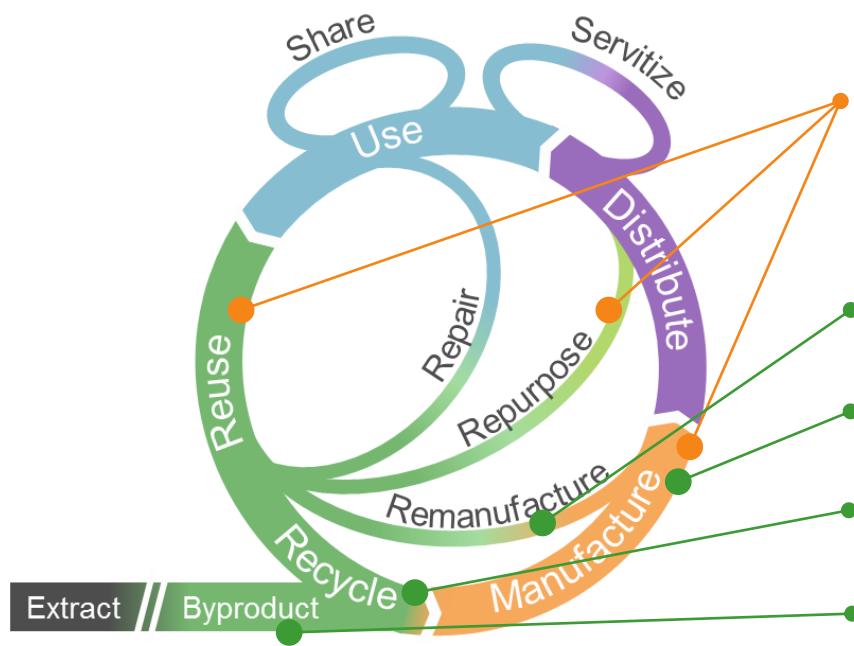
循环经济是“一种通过设计来恢复和再生的经济，它的目标是使**产品、部件和材料**在任何时候都达到**最高的效用和价值**。”

“Circular Economy.” Ellen MacArthur Foundation. Web. Oct. 11, 2016



Source: Diagram adapted from Knowledge Transfer Network. 2016.
Accenture Waste to Wealth, 2015

循环经济服务



工厂/公司级别:

废弃物零填埋(UL ECV 2799)

产品级别:

Certified rebuilt 认证重建
(UL safety certifications, various product categories)

Recyclability 可回收性能
(UL ECV 2789)

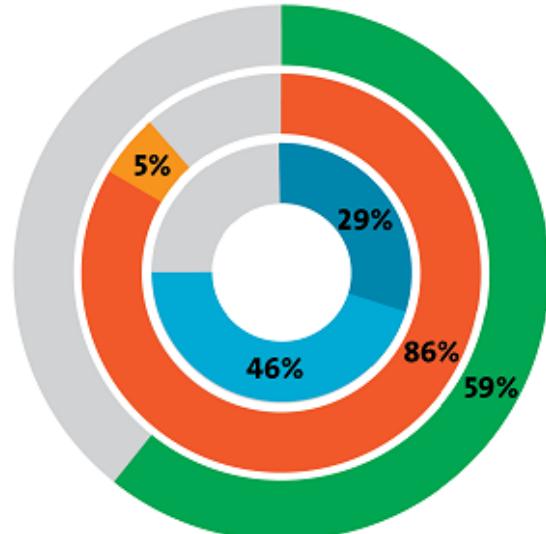
Recycled Content 可回收材料的使用
(including closed loop) (UL ECV 2809)

Byproduct Synergy 副产品的协同效应
(UL ECV 2990)

Biodegradability, biobased, rapidly renewable 生物
降解性, 生物基材料使用, 快速再生材料使用

UL3600 循环性事实认证项目Circularity Facts Program

“Measuring & Reporting Circular Economy Aspects of Products, Sites & Organizations” (UL3600)



目标:帮助企业彰显他们在从线性经济转型为循环经济进程中所做出的努力。

类似于透明度揭露的“营养标签”

使用**百分比动态环**的形式,体现**产品,生产场地和集团公司**各层面上对循环经济的贡献。

基于已有的**UL认证服务**的。

未来UL期待与品牌商一起,不断完善循环经济认证项目,未来**能源与温室气体、水利用和社会影响**方面的数据可能也会纳入认证范围。

认证交付



UL ECOLOGO多属性环境标准



建筑材料

UL16 Thermal Insulation
UL20 Wall board
UL33 Office Furniture
UL47/UL48 Surface Coatings
UL102 Door Leaf
UL150 Steel
UL152 Flooring Products
UL167 Mosaic Tiles
UL2761 Sealants/Caulking Compounds
UL2762 Adhesives
UL2763 EE Cancellations Transformers
UL2764 Gas Fired Condensers
UL2766 HVAC Systems
UL2768 Architectural Surface Coatings
UL2778 Recycled Plastic Products

个人护理

UL103 Personal Care
UL2783 Hand Sanitizer
UL2784 Hand Cleaners

卫生清洁用品

UL2791 Drain/Grease Trap
UL2767 Paint/Varnish Remover
UL82-86 Sanitary Paper
UL106 Laundry Bleach
UL2776 Laundry Detergent
UL2792 Biologically-based Cleaning/Degreasing Compounds
UL2798 Biologicals for Odor Control and Cleaning
UL2759 Cleaners
UL2777 Floor Care
UL2780 Urinal Blocks
UL2794 Disinfectants
UL2781 Pool & Spa

办公相关

UL33 Office Panels
UL35 Office Machines
UL2801/UL2803 Printing Related
UL2771 Paper
UL2773 Pens/ Mechanical Pencils
UL2785 Printing Cartridges

燃料/润滑油/交通工具

UL60 Corrosion Control
UL61 Car Wash
UL69 Lubricants
UL73 Combustible Gel Prods
UL74 Solid Biofuels
UL138 Runway Deicing
UL2779 Dust Suppressants
UL2797 Marine/RV Tank Holding Treatment

包装/包装袋

UL75 Pulp
UL76 Paper Board
UL79 Business Forms
UL80 Envelopes
UL87/UL100 Bags
UL125-127 Resin and Plastics
UL135 Beverage Packaging
UL145 Food Containers

电子产品和家电

UL110 Mobile Phones
UL106 Lighting
UL2841 Tablet
UL2853 Mobile Hotspot
UL2887 Wearable Electronic Product
UL7001 Refrigeration Appliances
UL7002 Portable and Floor Care Appliances
UL7003 Clothes Washers
UL7004 Cooking Appliances

外部多属性环境认证标准

NSF 140 and 332 (carpet and resilient flooring)
IEEE 1680.1 Computer, Notebook and Monitor
IEEE 1680.2 Imaging Equipment (Printer, Scanner)
IEEE 1680.3 TV
TCNA Green Squared
A138.1 (tiles)
BIFMA level (commercial furniture)

Appliance Sustainability Standard

家电类产品可持续生态标准

UL7001: Household Refrigeration Appliances 冰箱等制冷家电

UL7002: Household Portable and Floor Care Appliances 扫地机等

UL7003: Clothes Washers 洗衣机

UL7004: Household Cooking Appliances 烹饪炉等

UL7005: Household Dishwashers 洗碗机

UL7006: Household Room Air Conditioning Appliances 空调

UL7007: Household Microwave Oven Appliances 微波炉

UL7008: Household Dehumidifier Appliances 除湿机

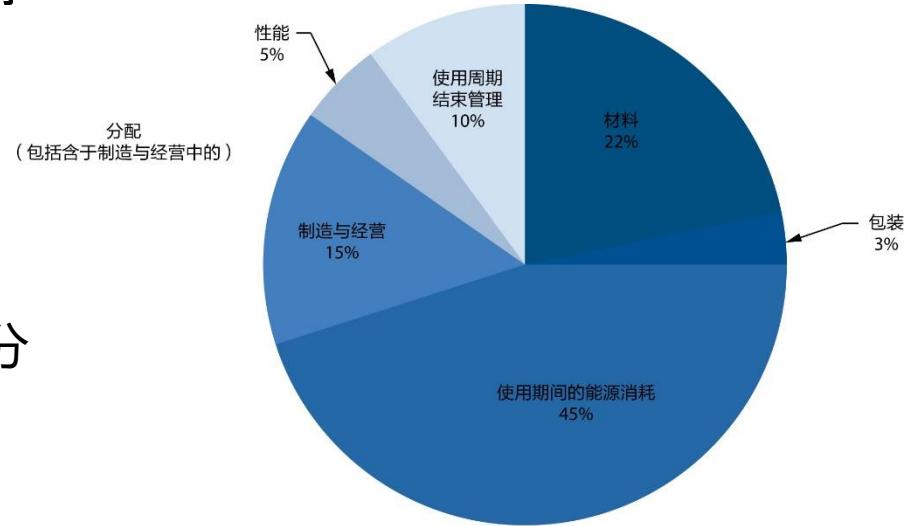
UL7009: To be Planned



举例:UL 7001:冰箱可持续生态标准

- 以生命周期评估为基础的
- 评价家电产品环境影响因素
- 先决条件满足的前提下, 获得60分即达到认证

- 材料—22分
- 包装 - 3分
- 能源和使用过程中的水资源消耗—45分
- 制造和生产运营 – 15分
- 性能 – 5分
- 产品废弃管理— 10分
- 创新 – 额外加分10分满分



su1395



生命周期过程中评价环境影响因素

	原材料	制造业	包装与分配	利用	生命周期结束
废气排放	■ 制冷剂的臭氧 枯竭潜势	▲ 生产过程中的排放		▲ 噪音	▲ 运输至资源 回收处
全球增温潜势	● 制冷剂排放 ● 发泡剂排放	● 生产过程中的排放		● 能源	
对生物资源的影响	● 危险废物	● 危险废物	● 可再利用性与包装内容		
对非生物资源的影响	▲ 回收内容	▲ 固体废物			
对水资源的影响 (水质和流量)	▲ 供应链的排放	▲ 生产过程中的排放			
对人体健康的影响	● 危险物质	● 危险物质	● 危险物质	● 危险物质	● 危险物质
社会经济影响				■ 继续使用制冷装置	

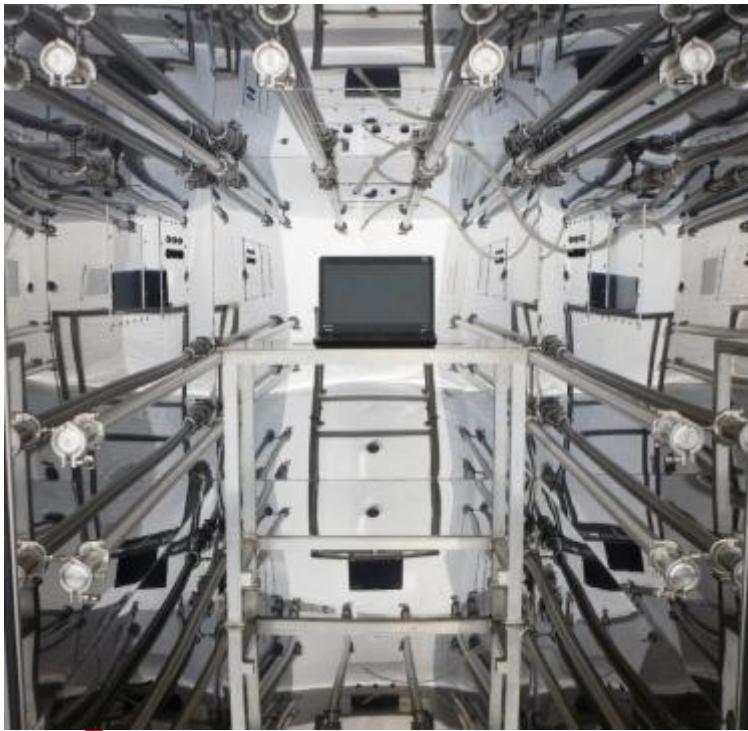
高 ●
中 ▲
低 ■

GREENGUARD绿色卫士认证

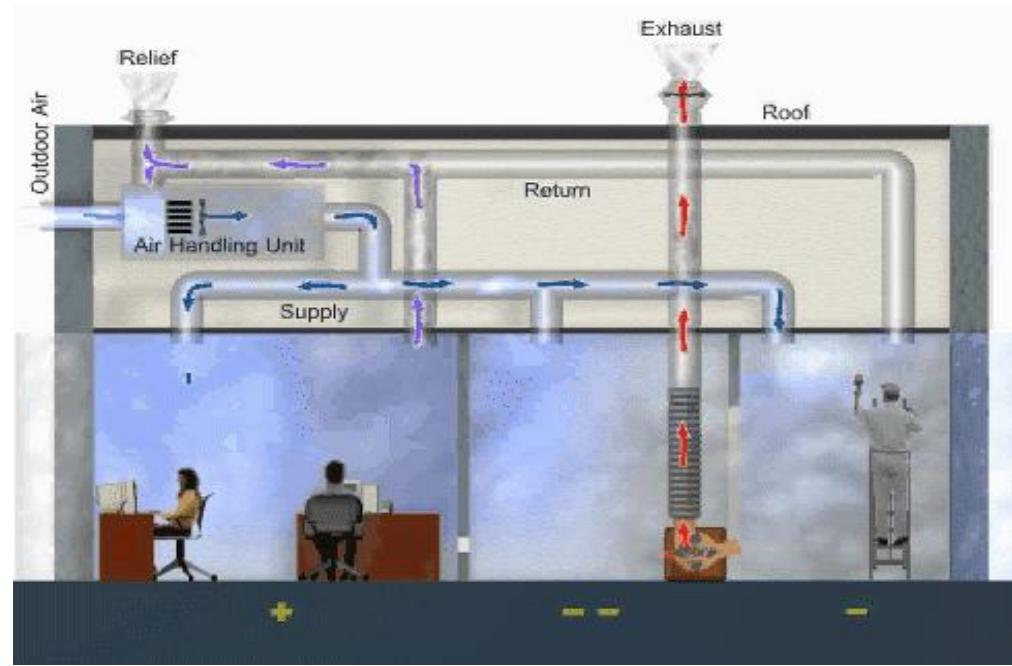


- 测测试条件真实仿真产品实际使用中状态，特别是通电发热的影响。
- 测试评用过程中的VOC散发量而非传统方法的VOC含量更合理
- VOC散发量由于是动态，受环境条件估产品在使影响，例如温度，湿度，空气交换律，背景污染。因而VOC散发量测试技术难度较大
- 对多达360种VOC物质进行定性和定量
- UL采用自主设计的不锈钢环境舱，舱体采用镜面钢和激光切割，不使用胶连接及密封，大大降低舱本身空白值
- UL 具有不同尺寸测试舱，适用于不同尺寸的样品

绿色卫士认证



结合产品使用环境,房间空间,产品负荷(表面积,个数等),通风量,将**GREENGUARD**标准限值与短期和长期暴露等级做比较**标准限值与短期和长期暴露等级做比较**



美国环保署推荐的Ecolabel标准



Consumers

Purchase products that use [safer chemicals](#) and conserve [energy](#), [water](#), and [materials](#).

- [Identify greener cleaners, carpet, electronics and more](#)
- [Make sense of ecolabels and marketing claims](#)
- [Understand the benefits of buying green](#)



Federal Purchasers

Learn how agencies are using their buying power to drive environmental improvement.

- [EPA recommendations for standards and ecolabels for feds](#)
- [Greening e-procurement systems](#)
- [EPEAT for greener electronics](#)
- [Executive Order 13693 and Implementing Instructions](#)

Learn More About

- [Why buy greener products?](#)
- [What makes a product "greener"?](#)
- [How can I identify greener products?](#)
- [How do I sell greener products and services to the federal government?](#)

Highlights

EPA is piloting draft guidelines for assessing standards and ecolabels in three building product categories – paints/coatings/removers, flooring, and furniture. [Read more about the pilot.](#) [Exit](#)



<https://www.epa.gov/greenerproducts>

案例分享：Whirlpool家电产品的Ecologo认证

Company: Whirlpool Corporation

BOOKMARK

Tags: +



Company: Whirlpool Corporation

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Tags: +

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UL Certification

Multi-attribute Sustainability CertificatShare:

Documents

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Enjoy exceptional cleaning, efficiency and fabric care with the Whirlpool® Cabrio® top load washer. Adaptive Wash
Company: Whirlpool Corporation

Tags: +

Keep your favorite clothes looking newer longer with the Whirlpool® Duet® 4.1 cu. ft. front load washer. Thanks to the Adaptive Clean wash system with Precision Dispense, detergent mixes with water to penetrate fabrics and virtually eliminate pretreating. The Cold Wash cycle even provides the best care for your clothes in its class by using adaptive wash actions with a concentrated solution of HE detergent and cold water to gently lift stains and soils from fabrics. This ENERGY STAR® qualified model also features a Sanitize cycle with Steam to eliminate 99.9% of common household bacteria. If you have an item that needs some extra time, the Presoak option will take care of it for you. When selected, it adds extra time for soaking and then automatically starts the cycle when it's complete, while the TumbleFresh™ option keeps clothes fresh and reduces wrinkles by continually tumbling clothes after the cycle's end for up to 6 hours.

Manufacturer Keywords:

Front Load Alpha Efficiency Clothes Washers Selling Features * Best Care for Your Clothes with the Cold Wash Cycle * Precision Dispense * 6 Hour TumbleFresh™ Option * CEE Tier III Qualified * On/Off PreSoak Option

BOOKMARK

ALL SUPPLIER CONTENT

BOOKMARK

ALL SUPPLIER CONTENT

UL SPOT TAG

Categories

UniFormat Categories

- Equipment & Furnishings ~ E100
- Equipment ~ E1010 Commercial
- Equipment ~ E101060 Laundry & Dry Cleaning Equipment ~ E101061 Laundry Equipment - Washers & Dryers

Standard Number Categories

- UL 7003 - 2013 Sustainability Standard for Household Clothes Washers

Product Type Categories

- Appliances ~ Clothes Washers/Dryer

Certification Categories

- Multi-attribute Sustainability Certification

案例：



Starting next year, **more Dell laptops, desktops and monitor back-panels will be made using recycled plastic**, according to PC Advisor magazine. These products will also be **certified by UL**. Dell will save money by reusing plastic, PC Advisor reports, **adding that the company has not confirmed whether the savings will be passed on to consumers.**



Apple Suppliers Achieved 100% Zero Waste to Landfill in China

MH&L Staff

Apr 3, 2017

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The company also tripled the number of supplier sites in the Energy Efficiency program, resulting in the reduction of over 150,000 metric tons of carbon emissions — the equivalent of taking 31,000 cars off the road for a year.

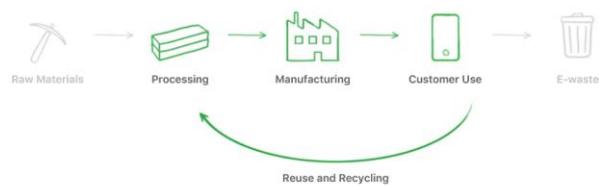


Environment

In addition, we're committed to making sure all the waste created by our supply chain is reused, recycled, composted, or when necessary, converted into energy. Seventeen of our 18 final assembly sites have received UL's Zero Waste to Landfill validation, diverting more than 240,000 metric tons of waste from landfills since January 2015. And we've recently expanded this initiative to 25 more suppliers.

Climate Change Resour

Closing the Loop in Our Supply Chain



Huawei多款手机达到Ecologo-UL110-手机可持续认证最高级别



谢谢



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联系方式
陶宏亮 Leon Tao

Environmental Program Manager
leon.tao@ul.com
+86 20 3213 1049
+86 139 2428 9093