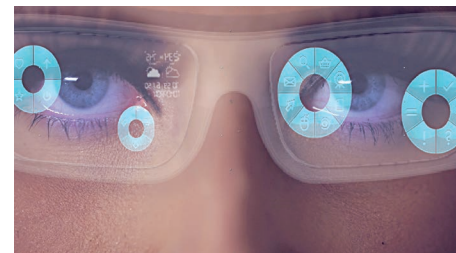


Integrated Solutions for Wearable Products



Wearable products, from consumer electronics to medical devices, are rapidly penetrating into an industry that will impact our daily lives from consumer electronics to medical devices, leading us to smarter ways of living. The ability to “wear” mobile products, that have been traditionally “carried”, means we need to give even more consideration to the potential safety issues of these wearable products than we would to the traditional products. Designers and manufacturers of wearable products need to understand the potential risks of the wearable technology and conduct comprehensive testing and performance verification which can help your wearable products stand out from the crowd. Many global regulatory organizations are in the process of adopting safety standards and/or regulations to prevent users from any accidents caused by the wearable products. Manufacturers who want to access the global market are required to have extensive knowledge of the global requirements and regulations and obtain certifications to enter their target markets.



Our services

UL provides comprehensive services, as your single source provider, ranging from identifying your target country and regional requirements to performing the appropriate testing to obtain the needed certifications. Our services include testing according to specific requirements and issuing a report customized to your needs. Leveraging our in-depth industry knowledge and many years of experience, we offer an extensive array of services that support your market access throughout the world.



Wireless Approvals and Safety Certifications

Our service portfolio covers all of your needs, from obtaining updated information and identifying wireless regulations and safety requirements applicable to testing to obtaining approvals or certification marks that will bring your products to market globally. Through our long-standing relationships with regulators around the globe and international CB schemes for mutual acceptance of test reports we will confidently support your product launches.

Certification of Wireless Charging Devices

UL 2738 is the safety standard for wireless charging equipment using the electromagnetic induction method. With some exception, UL 2738 applies to equipment where the output from its induction receiver assembly does not exceed 60 V dc or 42.4 V ac peak; and 100 VA (max). UL also provides logo certification services for “Qi” and PMA (Power Matters Alliance), wireless charging standards. Accredited as a third-party certification organization by the Wireless Power Consortium (WPC) and PMA respectively UL supports these organizations which formulate and promote the international standard for wireless charging compatibility of mobile devices.

European Directives

To sell products in the EU countries, manufacturers are required to create a TCF (Technical Construction File) sign a DoC (Declaration of Conformity) and affix the CE Marking and to demonstrate conformity to the requirements of the European Directives applicable to their products, for example, the Low Voltage Directive (1006/95/EC) and the EMC Directive (2004/108/EC) for IT and AV equipment, and the R&TTE Directive (1999/5/EC) for wireless equipment. You should be careful that DC equipment with less than DC 75V is outside the scope of the Low Voltage Directive, but the R&TTE Directive requires the equipment to comply with the Low Voltage Directive. UL also performs testing to EN 50332-1 and EN 50332-2 that were developed to protect users of portable audio equipment from exposure to excessive sound pressure. UL provides comprehensive services from product construction review to preparation of the TCF and complete support through the CE marking process that are essential for manufacturers to demonstrate conformance of their products to the applicable EU Directives.

Testing and Measurement Services

UL provides a wide range of testing and measurement services for various products. We perform safety, performance and reliability testing for your specified parameters in accordance with your specified testing methods. We work with you to customize testing parameters, protocols and timelines to suit your specific needs. Our services are developed to offer flexibility to adapt to your product development cycle from design to production. By leveraging UL test reports that demonstrate your product has been tested by an independent third-party organization, you can establish more efficient product development process, enhance reliability from consumers and differentiate your products from those of your competitors.

Preparation for IEC 62368-1

IEC 62368-1 represents a departure from two existing standards for ICT and AV products and moves the safety standards from prescriptive rules to a new approach based on hazard-based safety engineering (HBSE) concepts. UL has been offering testing and certification services since IEC 62368-1 ed1.0 in 2010 and UL/CSA 62368-1 ed1.0 in 2012 were published. And now we are able to offer the certification services for ed2.0 based on IEC/EN/UL/CSA standards. UL is uniquely positioned to assist manufacturers to understand, prepare for and comply with the standard. We can also cater for your business needs such as identifying tests required to evaluate compliance to IEC 62368-1 and on-site seminar.

Battery Testing and Certification

UL provides testing and certification of your batteries according to UL 1642 and UL 2054 as well as issuing CB certificates and test reports to IEC 62133 helping you obtain global approvals. UL also has accredited laboratories to perform testing for battery transportation in accordance with the dangerous goods regulations published by the Department of Transportation (DOT), based on United Nations (UN) Model Regulations.

Medical Equipment

mHealth, the technology that promotes interoperability between medical devices and surrounding systems, now attracts people’s attention. However, because of their design and intended use, mHealth products are subject to a wide range of different technical requirements, a challenge further complicated by a lack of harmonized standards and regulatory approval processes that can differ from country to country. Manufacturers of mHealth products can minimize these challenges by proactively planning a global compliance strategy at the very earliest stages of new product development. This approach can eliminate the need for design changes late in the development process, and reduce regulatory approval delays due to noncompliance. UL has the knowledge, resources and experience to provide advisory services and perform testing for market access throughout the world.

Sustainability / Environment

In October 2014, UL published new sets of sustainability requirements for wearable products including smart watches and smart glasses. The Outline of Investigation* 2887 is used to evaluate and certify these products for sustainability. UL also provides the following services to the wearable products via UL Shimadzu Laboratory, a joint venture with Shimadzu Techno Research.

- Exposure assessment of toxic chemicals to CA Proposition 65
- Analysis to European Directives including RoHS.
- CPSIA chemical testing
- Analysis for REACH Substances of Very High Concern (SVHC)
- Chemical analysis and environment testing to global regulations and standards

*An Outline of Investigation or Subject is a document that contains the construction, performance, and marking criteria used by UL to investigate a product when the product is not covered by the scope of an existing UL Standard for Safety. It will be published as UL Standard once consensus is established through further discussion and voting by Standard Technical Panel.

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