



# Introducing UL 8803, Outline of Investigation for Portable UV Germicidal Equipment With Uncontained UV Sources

UL Solutions, the global safety science leader, is pleased to announce the publication of the first edition of the UL 8803, Outline of Investigation (OOI) for Portable Ultraviolet (UV) Germicidal Equipment With Uncontained Sources. In early 2020, as more information about the COVID-19 pandemic became available, consumer-oriented germicidal devices that do not contain the UV source within the product enclosure flooded the market. With UL Solutions long history of providing consumers with guidance on potential risks in the marketplace, our experts were concerned there would be a significant risk to consumers due to the absence of established safety requirements to address UV overexposure. Additionally, many of these devices can produce ozone as an added disinfecting agent that, in sufficient concentrations, can cause respiratory issues.

In addition to our public outreach efforts, UL Solutions engaged with various interested parties to develop and establish requirements for this product type. UL Solutions experts applied hazard-based safety engineering concepts to develop requirements for integral safeguards and related markings. We are pleased to announce that this work has resulted in the publication of the first edition of the UL 8803.

UL 8803 covers portable germicidal equipment for use in households and similar environments. These devices are intended to expose the air and surfaces within an unoccupied area with uncontained UV energy. These devices are intended to remain stationary while in operation, as opposed to handheld equipment. This Outline of Investigation:

- Addresses the risk of personal injury from UV overexposure using an integral motion detection function, activation cycle requirements and product operating time limits. When integrated properly, these safeguards work to ensure the device will operate only when the area is unoccupied.

- Is used in conjunction with CSA C22.2 No. 250.4/UL 153, the Standard for Portable Electric Luminaires, to address applicable risk of electric shock, risk of fire and risk of personal injury due to factors other than UV overexposure and excessive ozone.
- Leverages criteria from IEC 62471 to measure and categorize the UV emissions from these devices.
- Applies ozone measurement methods and concentration limits currently in place for other consumer-based products.

UL 8803 has applications across multiple segments in and related to the lighting industry, including manufacturers, retailers and companies investing in germicidal equipment.

**Contact us for a quote or to learn more from your regional team about how UL Solutions can support your UV germicidal plans.**

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