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uv-technik Speziallampen

Member of Hönle Group

Evaluation of exemptions under Directive 2011/65/EU

Position of uv-technik Speziallampen GmbH to Exemption No. 4(f) of RoHS Annex III

uv-technik Speziallampen GmbH is a manufacturer of UV- and IR- lamps with a history of 30 years in manufacturing, developing and selling uv lamps and -components. We are located in Germany and employing 110 people.
We manufacture and sell the following products:

- UV low pressure lamps
- UV medium pressure lamps
- IR-lamps
- Power supplies
- UV sensors
- UV measuring equipment
- Other related spare parts

Our customers use UV-lamps and UV-components in the following applications:
- Water treatment

- Ballast water treatment
- Drinking water treatment
- Wastewater treatment
- Aquaculture/Fish farming
- Ultrapure water
- Swimming Pools

- Air treatment

- Kitchen exhaust air
- Air conditioning and ventilation systems
    - In use against COVID 19, for example
- Landfill exhaust air

- Surface treatment

- Drying and curing
  - UV curing
  - Glass treatment
  - Wood treatment
  - Food treatment

- Laboratory and process technology
  - TOC reduction
  - Vitamin D synthesis
  - Emission measurement

We currently produce around 100.000 UV low pressure lamps and 50.000 UV medium pressure lamps per year. The production volume will increase a lot according to the market demand.
The experiences of customers and us with alternatives to UV low and medium pressure lamps are as follows:

UV-C LEDs
- low efficiency (5-6%)
- expensive
- short lifetime
- not considered in the regulations for example in drinking water disinfection
- narrow-band emission
- wavelengths below 230nm are currently not available, which is critical for applications with ozone

Recent research is focused on increasing efficiency and reliability. But we assume that at least another 5 to 10 years of development time will be needed for manufacturers to use UV-C LEDs for above mentioned applications.

Excimer lamps:
- low efficiency (15%)
- sometimes you have to work with phosphors in order to generate the necessary spectrum
- powered by very high-voltage
- short lifetime

There are other technologies available which might justify investment into new machines, and which might gain market share with respect to conventional UV applications over time. But for numerous existing machines, processes and applications, there is no reasonable replacement available.
In consideration of printing applications the waive on mercury would lead to much more photoinitiators and so result in a negative effect.

In disinfection applications the waive on mercury will bring back more chlorin and other chemicals into the process, which effects the water, the food and the environment.

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UV-C lamps are established, cost-efficient, energy-efficient and have a high optical efficiency. All peripherals like sensors, controls, lamp drivers have been optimized over decades. Industrial users recycle UV-C lamps after their long lifetime. UV-C low pressure lamps and UV-LED lamps fall under the ElektroG, which regulates the placing on the market and taking back, as well as the environmentally friendly disposal of electrical and electronic equipment. On the basis of this law, manufacturers must guarantee that used lamps will be taken back / disposed of via collection points / material depots. The lamps do not belong in the normal household waste but must be handed in at the appropriately marked collection points or material depots. In this way, the materials are transferred to a material cycle and the mercury does not get into the environment.

We would express that the ban of mercury also effects the market for UV-C-low pressure lamps.

If the EU ban the mercury, companies out of Europe will enter the market, which should not be in the sense of EU.

uv-technik Speziallampen GmbH supports the wording, scope and requested duration of the exemption required by VDMA with regards to the usage of UV-discharge lamps for special purposes.

If we would be confronted with a professional ban of mercury, leading to huge amount of unemployment and loss of products and productivity.

Ilmenau, 26th May 2021; Alexander Frisch (Managing Director)