

# EN3023 – Electronic Design Realization

## The Squad

### UV Disinfecter

#### 1. Problem Statement

Due to the COVID-19 Pandemic, wearing masks and using sanitizer constantly became the new normal. Today people have adjusted their lifestyles to make peace with the virus. If COVID warned us of one thing, it is to take precautions before action. These viruses can quickly spread with the physical engagement of frequently used items like mobile phones, cash, car keys, masks, etc.

Using sanitizers is not suitable for most objects like money and mobile phone. So, there is a requirement for a convenient and easily reusable mechanism to sanitize these objects frequently and constantly.

#### 2. Solution

We propose an intelligent electronics system powered by a microcontroller to disinfect items. It will be a compact **360-degree disinfecting box using ultraviolet sterilization**. The disinfecter will use UV tubes to perform the task.

#### 3. Justification

It is a very time-consuming task to sanitize everything regularly. Using too many sanitizers is not eco-friendly since its production involves using chemicals. Also, there is a recurring cost of buying sanitizers. [Research](#) has also proven that [UV light is effective in killing viruses](#) in a short period.

#### 4. Intended Market Segment

Our solution will be less time-consuming, more environmental-friendly, and cost-effective. The current situation in the world suggests that there will be a niche market for this kind of product. Our primary target market will be the people who are constantly on travel. This device will be battery-operatable and compact. So, people who want to sanitize their keys and mobile phones when they enter their vehicles or come to their homes will be our main target crowd.

#### 5. Global Perspective

Since this problem is a global problem, finding a target audience outside the country is possible. The main goal of the device is to act as a user-friendly portable end product that anyone can use conveniently.