# Covid19UVmask project



# Highly effective, medical-grade, FDA-compliant, effortless breathing UV (ultraviolet) face mask

The only medical-grade face mask suitable for people with breathing problems and elderly.

# Covid19UVmask

The only COVID-19 virus protection currently approved by the WHO (World Health Organization) is filtering face masks, which are ineffective and make breathing difficult, with no other option.

**Unfortunately,** anyone who uses such a mask knows that **it is impossible to use filtering face masks without suffocating** unless you breathe unfiltered air through the mask/face side leaks.

#### Presented - a Covid19UVmask that has no competitors:

- **A new generation face mask that disinfects the air by using UVGI,** (\*) Ultraviolet Germicidal Irradiation, instead of a filter that makes breathing difficult;

- The first-ever mask that allows to breathe effortlessly, feeling no different from regular breathing;
- The original FDA-compliant mask is more effective against viruses than modern filtering masks;
- The only medical-grade face mask suitable for people with breathing problems and elderly;
- An innovative face mask designed to avoid multiple critical disadvantages of filtering masks.

(\*) The UVGI, Ultraviolet Germicidal Irradiation, is an air disinfection technology that damages the viruses' RNA, disrupting their ability to reproduce and cause disease.

## Covid19UVmask advantages over filtering masks.

#### Filtering masks do not protect against the COVID-19 virus.

The best available filtering face masks, i.e., KN95, are designed to filter particles sized over 0.3 microns when the COVID-19 virus particles are 0.05 to 0.15 microns. *(Link)* 

The Covid19UVmask uses UVGI, damaging viral RNA regardless of the virus size, making inhaled viruses non-infectious.

# The actual filtering mask's efficiency is 20% less than stated because it refers to the filter's efficiency but not the mask itself.

Inhaling, the filter resistance causes a significant pressure drop, resulting in an influx of 20% of contaminated air through the mask/face leaks, so the filter mask effectiveness does not exceed 80%.

The Covid19UVmask has no filters that cause an influx of unfiltered air, so the mask is 20% more effective than any filtering mask.

#### The regular use of filtering masks causes headaches and hypoxia.

Stanford's study found that filters that make it harder to breathe reduce users' oxygen intake by up to 20%, resulting in headaches from hypoxia. *(Link)* 

The Covid19UVmask has no filters that limit oxygen consumption, making it suitable for whole-day use and people with breathing problems and the elderly.

### Covid19UVmask technologies

Today, UVGI is a proven technology recommended by the CDC (Centers for Disease Control) and widely used to disinfect hospitals, offices, and homes.

**Unfortunately, UVGI is not currently applied to face masks** due to the extremely high power consumption of modern UV LEDs, which limits the mask's operating time to minutes, drains the battery, or requires a larger battery, making the mask too heavy to wear.

To overcome this technological inefficiency, several inventions have been made and applied to reduce mask power consumption and increase its operating time while keeping it at a wearable weight.

The Covid19UVmask inventions, which implement UVGI disinfection using modern low-efficiency UV LEDs are filed at **USPTO (US patent and trademark office)**, PPAs 63/314,745, 63/284,175, as follows:

"METHOD AND SYSTEM FOR IMPLEMENTING AN ANTIVIRAL FACE MASK BY USING UVGI (ULTRAVIOLET GERMICIDAL IRRADIATION) FOR VIRAL DISINFECTION, AND METHOD AND SYSTEM FOR REDUCING UVGI FACE MASK ENERGY CONSUMPTION." and

"SYSTEM AND DESIGN THAT ALLOW TO PUT ON, TAKE OFF, AND WEAR HEAVY FACE MASKS COMFORTABLY. THE METHOD ALLOWS MAKING FACE MASKS THAT USE GERMICIDAL ULTRAVIOLET IRRADIATION AS A DISINFECTION METHOD WEARABLE."

# Covid19UVmask target consumers

Covid19UVmask capabilities create distribution channels targeting the following consumer groups:

- **People with breathing problems and elderly**, as the Covid19UVmask is the only FDA-compliant medical-grade face mask, allowing them to breathe effortlessly unlike available filtering masks. *Distribution: Wholesale/pharmacy chains/by medical prescription/to reduce medical insurance cost.* 

- Medical personnel, police, security, cashiers, waiters, etc., i.e. personnel forced to come into daily contact with infected or potentially infected people; as the Covid19UV mask is the only medical-grade face mask suitable for all day long use, unlike filter masks which lose effectiveness after a few hours of use, and it becomes difficult to breathe due to fogging and contamination.

Wholesale/hospitals/corporate sales/ to maintain staff efficiency /to reduce medical insurance cost.

- **Health-concerned individuals** and gadget lovers, as the mask is the only medical-grade mask that provides natural, comfortable breathing with the highest level of protection against viruses. *Distribution: Online sales/retail sales at pharmacy chains.* 

- Covid19UVmask "REVERSE" modification; To protect others from an infected person during ambulance or hospital transport by the "REVERSE" modification that disinfects the exhaled air instead of the inhaled. (No competitive devices are available.)

# The Covid19UVmask project

At the beginning of the project, to reduce cost and development time, it was planned to modify the filtering mask manufactured by a partner in China by replacing the filter with the original UV reactor.











www.covid19uvmask.com/uvmask-exp



www.covid19uvmask.com/production-exp



# The current state of the Covid19UVmask project

Later, as the project progressed, due to difficulties in controlling production and the inability to protect the intellectual property of the mask in China, it became reasonable to move the project to Israel.

Based on previous experience and considering the innovative value of Covid19UVmask, only Israeli companies were carefully selected and pre-contracted to form a team to put the mask into production.

#### The current state of the Covid19UVmask project

Currently, the Covid19UVmask team companies are pre-contracted and are ready to provide final development, pre-production and bio-certification for commercial production of 1000-10,000 masks per month at a pilot plant in Israel.

#### Please do not hesitate to contact me for cooperation or further information.

Sincerely yours,

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