

Purification Device Having Heated Filter for Killing Biological Species, Including COVID-19

ABSTRACT

An apparatus is used with supplied power for treating air flow of an air handling system of a facility. A frame has a plenum with an inlet and an outlet. The frame is configured to position in the air flow of the air handling system for passage of the air flow therethrough. A filter is disposed in the plenum and is configured to filter the air flow therethrough up to a filtration threshold. An ultraviolet light source disposed in the plenum is connected in electrical communication with the supplied power and is configured to generate ultraviolet radiation in the plenum. A permeable metal barrier disposed in the plenum is configured to impede the air flow therethrough up to an impedance threshold. The barrier is connected in electrical communication to the supplied power and is heated to a surface temperature.

Figure 1