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SPECIAL LIGHT PRODUCTS



UV CURING
Device

UV Curing

UV curing is a process in which ultraviolet light and visible light is used to initiate a photochemical reaction that generates a crosslinked network of polymers.

This UV curing module is not a stand-alone module, it is part of a UV curing machine of the customer.

We can design every model to your specific needs.

UV Curing module

The module consists of the following components:

1. Stainless steel UV Curing Box
2. Power Cabinet
3. Cable Harness consisting out of 2 LED control cables
4. Temperature control
5. Fan Power

In the stainless-steel UV curing box, the UV power from the top is generated by 6 PCBs with each 20 x 20 LEDs with a wavelength of 405nm. The LEDs are equally distributed over the surface of 500 x 700mm which make it homogeneous. At maximum current setting (500mA) this will generate 600mW/cm² at a distance of 30 mm approximately.

The UV from the sides is generated by 10 PCBs with each 5 x 20 LEDs with a wavelength of 365nm.

The side PCBs are divided in two sections for different purposes; larger and smaller products.

- The top three rows of a side PCB, 40 LEDs, are provided with a 50° angle. This section is for the larger product, e.g. >15". At maximum current setting (500mA) the output is approximately 200mW/cm² at a distance of 30mm.
- The bottom rows of this side PCB, 60 LEDs, are provided with a 8° angle. These lenses narrow the UV power to a smaller beam to be able to have enough power at larger distances, for smaller products. Output at maximum current (500mA) is approximately 200mW/cm² at a distance of 80mm.

Everything under control

The top and two side sections can be controlled separately. In normal operation the top section will be combined with either the 8° or the 50° angle, depending on the display size.

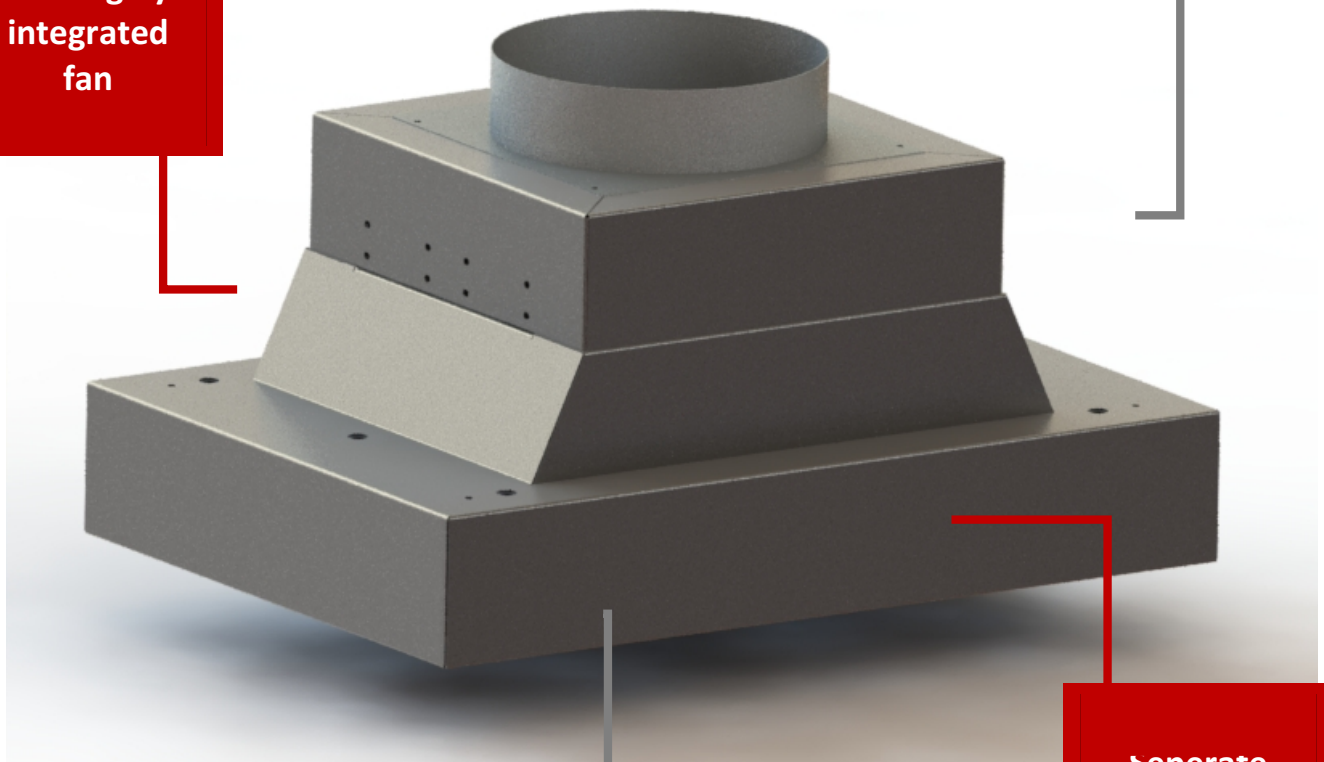
Safe

The cooling of the UV curing box is done by one radial fan and the system is protected by a built-in safety system.



**Cooling by
integrated
fan**

**Stainless steel
UV curing box**



**Seperate
operation of
top and sides**

**Built-in
Safety system**

The primary advantage of curing finishes and inks with ultraviolet lie in the speed at which the final product can be readied for shipping. In addition to speeding up production, this also can reduce flaws and errors, as the amount of time that dust, flies or any airborne object has to settle upon the object is reduced. This can increase the quality of the finished item and allow for greater consistency.

Environmentally friendly

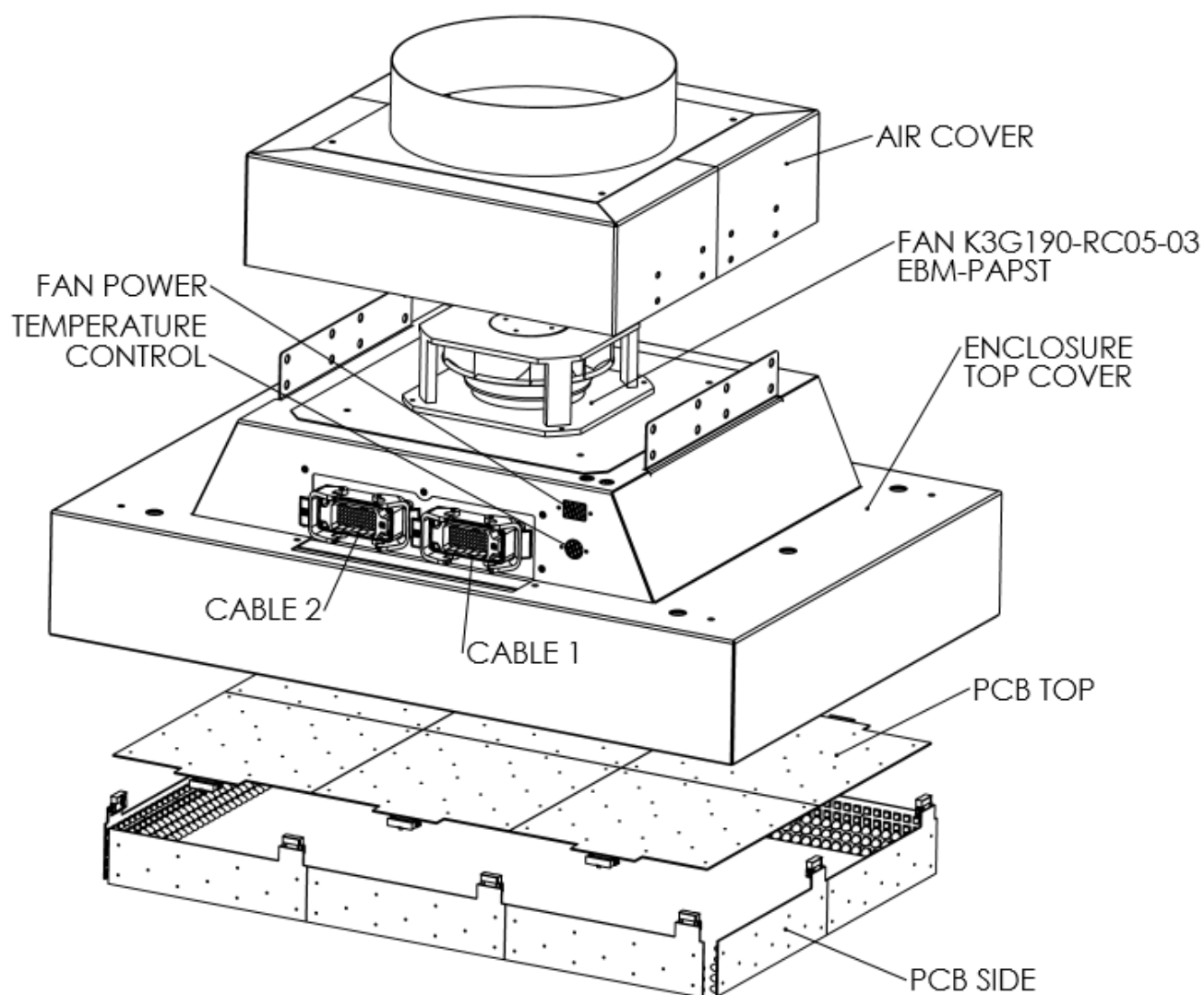
UV LED curing units are environmentally friendly and have a much greater energy efficiency than traditional UV lamps

And

They also have significantly lower operating temperatures and longer operating lifetimes.

Product specifications

The unit is designed for full production of products that need to be cured under U.V. from the top and the sides.



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