
HIVE

Frequently asked questions about Hive Plasma:

- **What is Hive Plasma?**

In every Hive light is a plasma bulb with new light emission technology. Hive makes plasma work for image capture applications such as motion pictures, photography, digital production. Plasma combines the daylight balance and high output of HMIs with the energy efficiency, reliability and durability of LEDs, but exceeds both in color rendering and spectrum. Plasma emitters use a single point-source bulb, with no electrodes or filaments. Instead, the quartz bulb is filled with a blend of noble gases and metal salts to make an inert gas. When this gas is excited it shifts its state of matter from gas to plasma, which results in an incredibly powerful light source, essentially a micro-star! Hive's plasma lamps are daylight balanced at 5600K, boast a CRI of 94, and create full, even spectrum light.

- **Where did Plasma lights come from?**

The history of plasma lighting actually dates back to Nikola Tesla. Electrode-less lamps were invented by Tesla when he experimented with high-frequency currents in glass vacuum-tubes. It has taken decades of R&D to make this technology economical and useful for general lighting applications. Hive has taken this technology, originally developed for street lights, and is proud to be leading the charge into the production industries. Hive makes plasma fixtures for image capture that cinematographers, photographers and visual professionals in all fields can use to maximize the benefits of this new technology.

- **What is the comparable output to HMI, Tungsten and other sources?**

Plasma is 2X more efficient than HMI, and 4X to 8X more efficient than Tungsten depending on the fixture. Hive rates the power consumption of its lights like Tungsten, using the full system watts, so our Wasp Plasma Par pulls 275 Watts total, using 2.3amps on 120V power. It produces the equivalent output (same distance, same beam angle, same footcandles) as a 500 full system watt Hmi par fixture, generally referred to by its bulb as "400W" Hmi. Hive's 275 Watt system also produces roughly the same illumination as a 2,000 Watt Tungsten fixture, depending on the model.

- **How long do Plasma bulbs last?**

Hive's Plasma bulbs are designed to last 30,000 hours without noticeable loss of output or color shift. Hive recommends replacing emitters at that point, but they are rated to stay on for over 50,000 hours.

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- **What about heat?**

Hive's lights generate far less heat than HMIs and Tungstens. They do get warm, but you can touch them without gloves and move them around while they are on.
- **What about strike, and hot re-strike?**

Hive's lights have a strike time much like an HMI. When started cold a Hive Plasma fixture has a 30-90 second strike time. You can hot re-strike a Hive Plasma safely and as often as you want without affecting the bulb life or the electronics, but depending on how long the fixture has been on it can take up to 3 minutes to re-strike. When attempting a hot re-strike, initially it may not appear to be doing anything for 30 seconds. Don't Panic! The Hive plasma system is self-regulated and checks its own temperature. When the appropriate temperature is reached (usually in 30 seconds) the light will begin the normal strike you saw upon cold startup. Did we mention Don't Panic? Also carry a towel.
- **What about flicker?**

Plasma is flicker free up to a theoretical maximum of 225,000,000 fps. That's not a typo, *two-hundred-and-twenty-five million frames per second*, we just can't test that high because no capture device can do that many frames per second... yet. We have reached frame rates with cameras of one million fps and detected no signs of flicker, so for all current high speed cameras on the market we are completely flicker free!
- **What about noise?**

Silent thanks to solid state electronics. The sound guy won't be able to hear it, even if he points the boom at the Hive fixture.
- **Does Plasma dim?**

Plasma is dimmable mechanically so it depends on the Hive fixture. If you want your Plasma to dim, try the Hive HoneyBee. However, all Hive's fixtures work great with traditional scrims, diffusion, gels etc. And their low heat will make gels and scrims last much longer.
- **Can I use plasma on blue and green screens?**

Hive's Plasma performs beautifully in soft boxes, spacelight silks, and through diffusion, which make them a great daylight solution for blue- and green-screen applications. This is because plasma emits more light in the Chroma Key Blue and Chroma Key Green part of the color spectrum, so you get more Chroma wavelengths than Tungsten with the same output intensity. Short version: Hive plasma vibrates at the right wavelength for chroma keying!

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