

UV Curing Lamp - Troubleshooting

Problem	Possible Cause	Remedy
Media not being cured effectively	Dryer reflectors are dirty or not focused correctly	Clean or re-focus reflectors.
	External contamination of lamp	Clean lamp of external contamination, such as spray powder or other contaminants.
	Photoinitiator material not equally distributed as coating and ink material not correctly mixed.	Confirm that all coating and ink material has been stirred to homogeneity before application so that all of the photoinitiator material is equally distributed.
	Lamp has overrun hours of effective usage	Verify the number of operating hours that the lamp has run. Different applications result in different lamp lifetimes. Lamps generally have an energy output of about 80% of their original specification after 1000 hours, provided that the lamp is operated in an appropriate environment. If the lamp has over 1000 hours of use, it may not generate enough ultraviolet energy for curing your application
Lamp is bowed or looks like a banana	Lamp has been overheated	The lamp must be in a cooled and controlled environment where the surface temperature of the lamp body should be at a temperature of between 600 - 800 degrees C. If the air around the lamp is not conditioned properly, this temperature will rise causing the quartz tube to soften and lose its rigidity. Adjust the cooling and airflow around the lamp to reduce the temperature of the lamp body and check condition of reflectors. However, ensure that the lamp body is not cooled below 600 degrees C, as below this temperature could lead to mercury condensing out of the plasma, which will effect lamp power and performance.
Lamp ignites but will not achieve full intensity.	Too much cooling – mercury condensed behind electrodes	Check cooling system
New lamp will not ignite.	Terminations loose.	Confirm all terminations are tight.
	Power supply fault.	Seek advice from equipment supplier.
	Lamp fault.	Replace lamp
Lamp discoloured. 1.Black ends 2.Clouding 3. Mirror coated	There is natural “blackening” of the quartz tube at each end during the life of the lamp.This is the result of the electrode material depositing on the inside of the tube during its use.	Replace lamp
	Natural solarisation or clouding of quartz occurs as the quartz reverts to its natural crystalline structure, which is opaque to ultraviolet energy	Replace lamp
	Overcooling results in mercury being deposited on the inside of the lamp giving it a mirror-coated affect.	Replace lamp
External devitrification	Ink, cleaning solution or finger mark has burnt in on a hot lamp, the arc is diverted to the polluted spot and burns a hole in the tube causing loss of vacuum.	More caution with lamp changing and/or cleaning.
Lamp is tripping-out (arcing against the reflector or machine).	As UV lamps usually operate at high voltages it is possible that if the tube is in close proximity to the lamp head arcing can occur. This mode of failure is also sometimes characterised by the presence of a pinhole in the tube.	Check that the lamp is correctly located and that the reflectors are not distorted.
Orange discoloration inside the tube	Lamp has mechanical break (leak) whilst burning.	Replace lamp.