

Application Note – Xicato Module Chemical Compatibility

Version 20120417

Background

LED dome materials, such as silicone, may be affected by the presence of VOCs and chemicals. These substances may react with the silicone itself. In other cases, the contaminant may diffuse into the silicone material and later oxidize in the presence of heat or light. While Xicato modules are IP-rated, care should be taken to avoid exposure to the following substances.

Chemicals to Avoid

The following chemicals should be avoided, even in small quantities, as they may react with the silicone LED dome material within the module:

Hydrochloric Acid	MEK (Methyl Ethyl Ketone)	Dichloromethane
Sulfuric Acid	MIBK (Methyl Isobutyl Ketone)	Tetrachloroethane
Nitric Acid	Toluene	Castor Oil
Acetic Acid	Xylene	Lard Oil
Sodium Hydroxide	Benzene	Linseed Oil
Potassium Hydroxide	Gasoline	Petroleum Oil
Ammonia	Mineral Spirits	Silicone Oil
Sulfur (Used in Rubber Processing)	Rosin Flux Solder	Halogenated Hydrocarbons (Containing F, Cl, or Br)

Conclusion

Module sensitivity levels to these and other chemicals are unknown at this time. The customer is encouraged to perform their own compatibility testing to ensure materials used do not affect product performance.

References

The Lighting Industry Federation. "LIF Technical Statement No. 49." *The Lighting Industry Federation*. Web. 10 April 2012. <www.lif.co.uk>