

# Practical Application of UV-LED Curing Technology to UV Inkjet

**Tom Molamphy and Michael Beck, Phoseon Technology (USA)**

## Abstract

*UV-LED curing systems have started to play a larger role in many UV curing applications - including wide format and single pass UV inkjet – and their application and adoption will likely continue to accelerate over the next several years.*

*Adoption is increasing based on the wider availability of suitable UV-LED inkjet ink formulations. The inherent advantages of UV-LED technology - in terms of lifetime, consistency of output, instant on/off and lower heat production, as well as the possibility for systems that are smaller and more robust when compared to existing traditional lamp solution - makes it particularly attractive for UV Inkjet applications.*

*Just like all new technologies there are important differences, distinctions and choices that must be made if a successful implementation is to be achieved. UV-LED curing systems are not the same as traditional mercury vapor lamp systems and the issues of required irradiance/power output, measurement of irradiance/power and understanding of the effects and availability of wavelengths available today in UV-LED are key in making appropriate decisions about the suitability of the technology. These and other system level considerations will be discussed and the paper will outline several successful implementations of UV-LED for inkjet that are currently in the public domain.*

*The paper will also outline the challenges and will share some data and insight into the practical application and efficacy of newer generation UV-LED systems when applied to optimized inks sets for UV Inkjet applications.*

## Biography

*Tom Molamphy is Vice President of Sales and Marketing for Phoseon Technology. Tom has over 20 years experience in high tech industries - primarily in the areas of electronics, printed circuits and semiconductor manufacturing processes and equipment - where he has held a variety of positions in sales, product marketing and engineering. He joined Phoseon in its "embryonic" stage in 2003. Tom holds Bachelors and Masters Degrees in Production Engineering.*

*Michael Beck is the North American Sales and Marketing Manager for Phoseon Technology. He has over 24 years of experience in sales management, technical support, and engineering. Mike has held sales management position at Siemens EAS Division, View Engineering and MVT Ltd. and began his career as a software development engineer and then transitioned into applications engineering for Synthetic Vision Systems, a pioneer in 3D machine vision. He received a Bachelor of Science degree in Electrical and Computer Engineering from Wayne State University in Detroit, MI.*