

3M™ Novec™ Electronic Grade Coatings LED Compatibility Test



Engaging and
Enabling Customers



3M™ Novec™ Electronic Grade Coatings for LED Compatibility

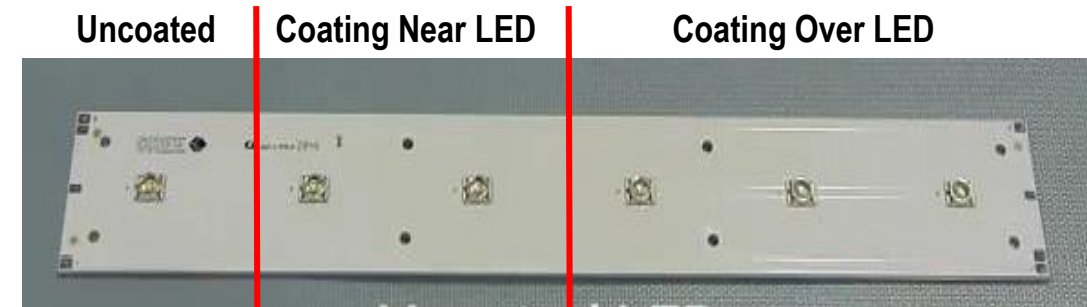
Cree XLamp LEDs Chemical Compatibility Support Document¹

Performance with Cree® XLamp® MX-6, XP-E and XR-E LEDs

- LED Test Board was coated, powered for 1000 hours and evaluated
 - LED-1: Control, uncoated
 - LED-2 and 3: Novec coating applied around the base of the LED but not on the LED lens
 - LED-4, 5 and 6: Novec coating was applied over the LED lens by dip coating
 - A glass dome was epoxy sealed over the LEDs to contain any volatiles that off-gas from the coating
- Novec 1710, 2702 and 2708 coatings
 - Showed little or no discoloration on Cree LEDs
 - Maintained LED tolerances for Luminous Flux, Chromaticity and Color Rendering Index (CRI) per the values noted in Cree Data Sheets
 - Rated UL-94 V-0
 - Help protect against moisture, water immersion, oils, chemicals, sulfur and environmental corrosion



Cree LEDs Tested



LED-1 LED-2 LED-3 LED-4 LED-5 LED-6

LED Test Board

- After aging, light output was measured using a 1-meter integration sphere with [OL 770-LED Test and Measurement System](#)
- An [Agilent 34990A Data Acquisition/Switch Unit](#) was used to collect the data

¹ <http://www.cree.com/search-results?&lcid=9&q=chemical%20compatibility&tz=America%2FChicago>
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