

PixJet® Formulations: Solvent-free

Pixelligent's PixJet® formulations are ready-to-use, one-component, solvent-free nanocomposite materials for inkjet-printing with fast UV cure under air or inert environment. Incorporating Pixelligent's PixClear® ZrO₂ nanocrystals, these formulations offer high refractive indices while maintaining high transparency and low haze at film thicknesses between 10 and 30 microns. These products can be applied in display applications requiring high RI planarization layers, multi-layered structures, or microlens deposition.

Formulation	Refractive Index (589 nm)	Viscosity (cP)	Surface Tension (dyne/cm)	Nanocrystal	Application	UV Cure
PixJet® SFZ5	1.65	20	25	ZrO ₂	Planarization Layer	Air
PixJet® SFZ6	1.65	20	37	ZrO ₂	Microlens Array	Air
PixJet® SFZ7	1.65	20	37	ZrO ₂	Microlens Array (Reduced Color)	Inert

General Product Information

Applications

- High RI Optical Coatings
- OLED Display Planarization Layers
- Micro-optics of OLEDs and MicroLEDs
- Sensors

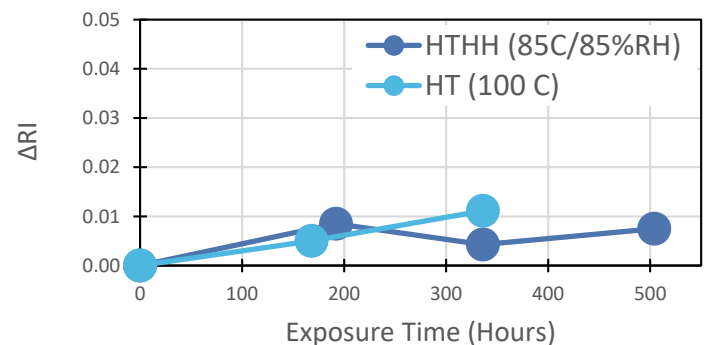
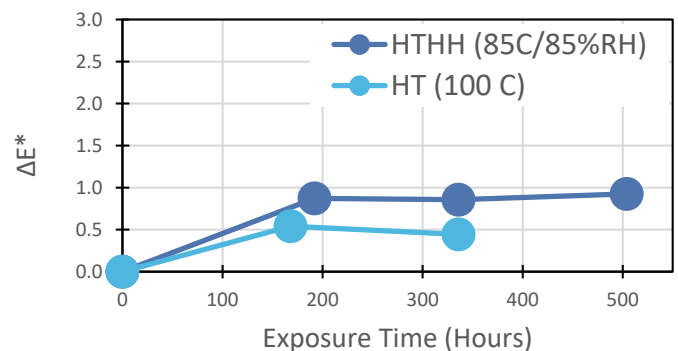
Benefits

- Low viscosities for inkjet-printing up to 45°C
- Compatible inkjet printheads: KM1024i Series, DMP-2850
- Droplet volumes: 6-30 pL
- Frequency stability of 12 kHz

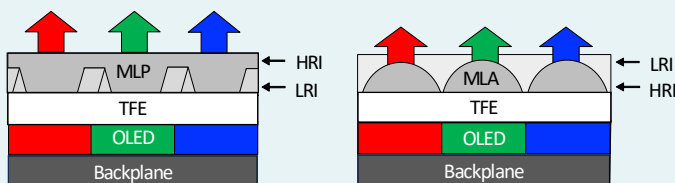
Key Features

- Refractive index of 1.65 at 589 nm
- High transparency and low haze across visible wavelengths
- Excellent wetting and thickness uniformity on glass substrates (10 to 30 µm)
- Microlenses with 0.44 height-to-diameter ratio (PixJet® SFZ6 and SFZ7)

Reliability Data for PixJet® SFZ5



High RI planarization and MLA in OLED devices



FE-SEM images of 25 µm lenses of PixJet® SFZ6

