

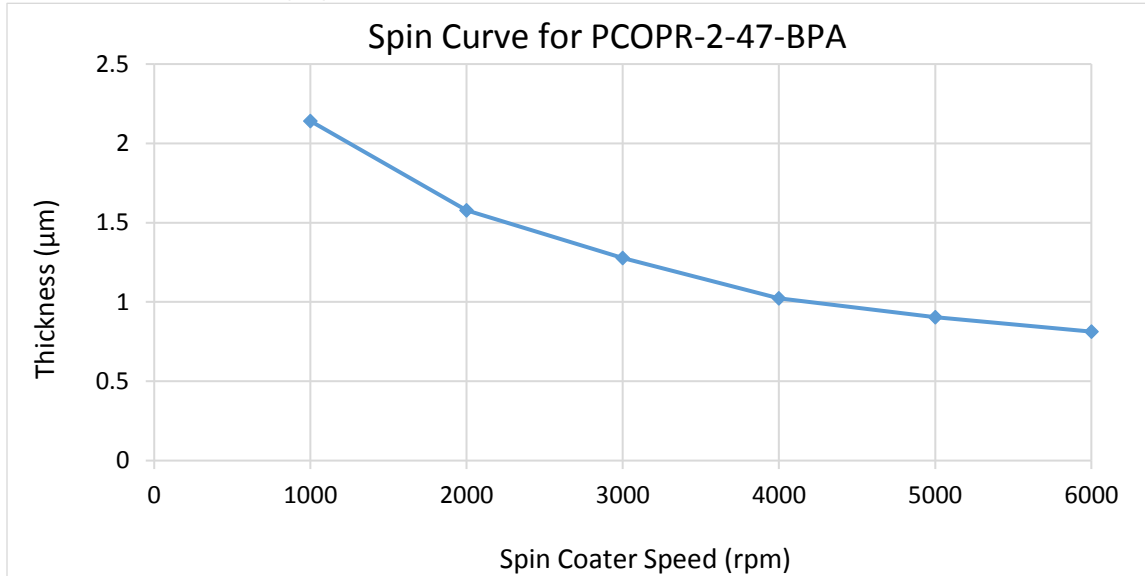
Part Number: PCOPM-2-47-BPA

Nanocrystal: ZrO₂ – PR (90wt% loading in monomers)

Solvent: PGMEA

Monomers: Bisphenol A Diglycerolate Dimethacrylate

Photoinitiator: UV curing agent is included



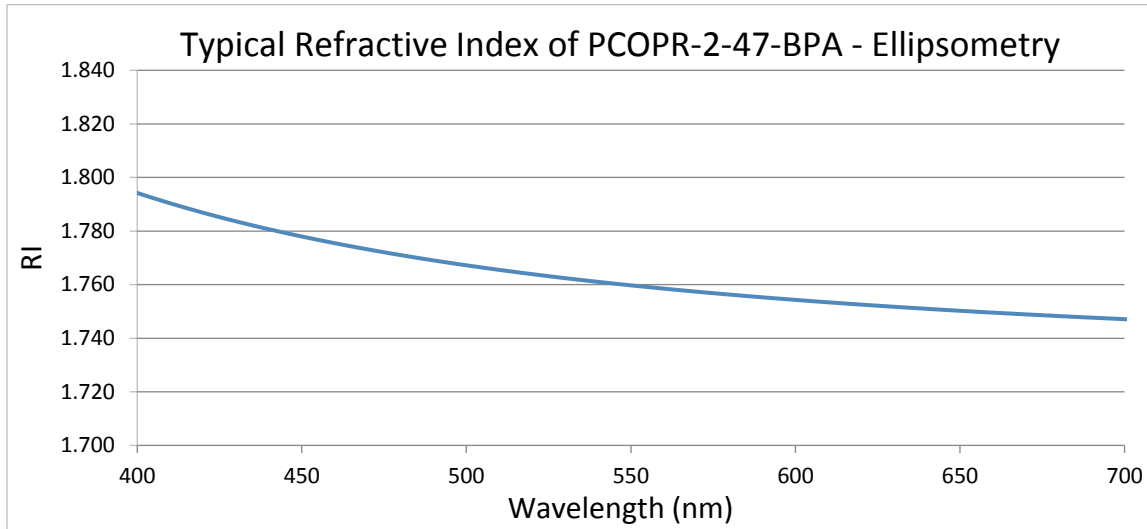
The following cleaning process is recommended before spin coating films:

1. Using a detergent-RO water mixture (eg. 2% Valtron), scrub the glass substrates with a nylon brush
2. Rinse the substrate with RO water thoroughly
3. Dip the substrate into isopropyl alcohol
4. Oven dry at 100°C for 20 minutes
5. Optional: Ozone treat for 5 minutes on the side of substrate to be coated

Spin Coating and Curing Process:

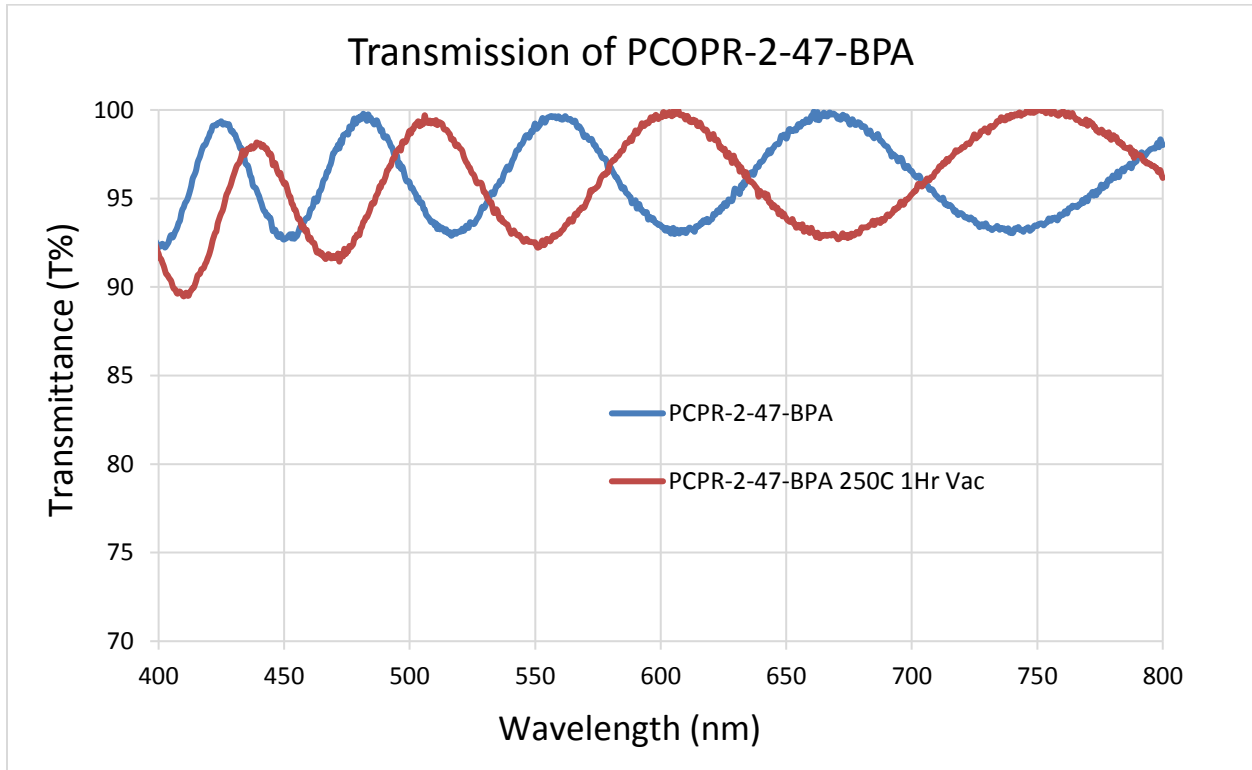
1. With the clean substrate on a spin-coater chuck, use a pipette to cover the surface of the substrate with PCPN-80-BMT
2. Pre-spin film at 250 rpm for 45 seconds at an acceleration of 250 rpm/s². Then, increase spin speed to desired rpm based on spin curve above. This should be at an acceleration 250 rpm/s² less than the desired spin speed. Spin film at this speed for 15 seconds.
 eg. If a 1 µm film is desired, spin at 250 rpm at 250 rpm/s² for 45 seconds followed by 4000 rpm at an acceleration of 3750 rpm/s² for 15 seconds
 Note: these conditions are for 2.5" x 2.5" 0.7mm thick soda lime glass substrates. Conditions for other substrates may vary
3. Cure using a mercury "H" bulb at 9J/cm²
 Note: Pixelligent uses a Dymax EC-5000 system and cures films for 180 seconds at 50mW/cm²
4. Post-bake at 120°C for 3 minutes in air

Typical Data from Spin-Coated Films



%T Lambda 850 UV-Vis spectrometer	>95
RI @ 633nm Meticon prism coupler	1.751
Abbe Number	38
Viscosity (formulation) Brookfield viscometer TC650	~6 cPs

High Temperature Stability: the blue solid curve is the transmittance of the freshly made film while the red dot curve is the transmittance of the film after 1 hour 250 °C baking under vacuum. The consistency of transmittance demonstrates the high temperature stability of PCOPR-2-47-BPA.



Chemical Resistance: the following table shows that PCOPR-2-47-BPA resists all the common wet-processes during OLED panel fabrication. Adhesion to glass substrate is tested by scotch tape with no cross-hatching and a green check mark indicates passing performance.

	HCl/H ₂ O (1:3) 30 min	HCl/H ₂ O (1:1) 30 min	KOH (0.5wt%) 30 min	KOH (1wt%) 30 min	KOH (5wt%) 30 min	Acetone/ Sonicate 5 min	IPA/ Sonicate 5 min	DI Water 30 min	NMP 30 min
PCOPR-2-47-BPA	✓	✓	✓	✓	✓	✓	✓	✓	✓