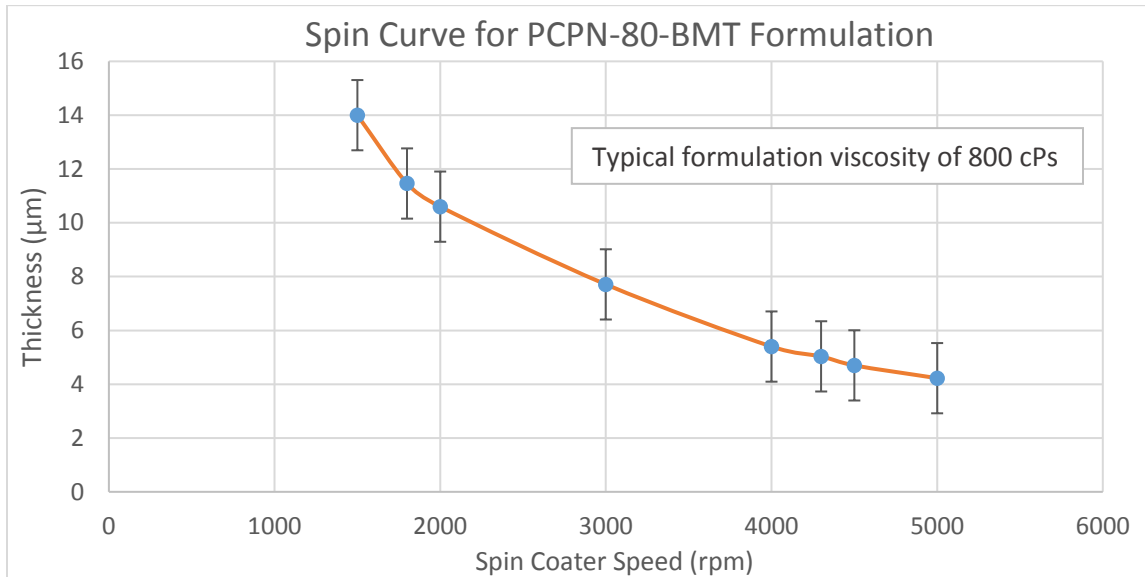


**Part Number:** PCPN-80-BMT

**Nanocrystal:** ZrO<sub>2</sub> – PN (80wt% loading in monomers)

**Monomers:** Benzyl Methacrylate – TMPTA

**Photoinitiator:** Benzophenone (5wt% compared to monomer)



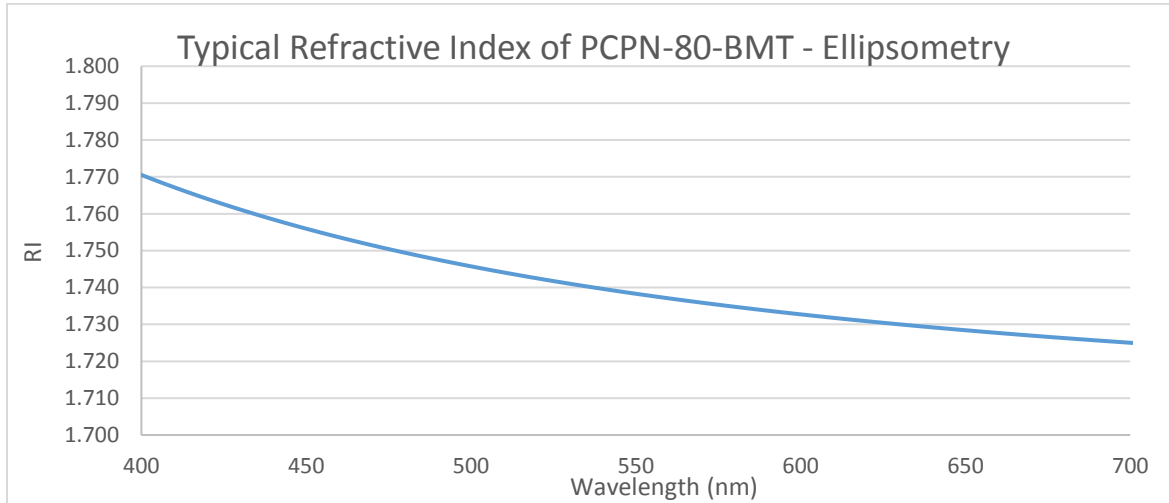
The following cleaning process is recommended before spin coating films:

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/s<sup>2</sup>. Then, increase spin speed to desired rpm based on spin curve above. This should be at an acceleration 250 rpm/s<sup>2</sup> less than the desired spin speed. Spin film at this speed for 15 seconds.  
eg. If an 8 µm film is desired, spin at 250 rpm at 250 rpm/s<sup>2</sup> for 45 seconds followed by 3000 rpm at an acceleration of 2750 rpm/s<sup>2</sup> for 15 seconds  
Note: these conditions are for 2.5"x2.5" 0.7mm thick soda lime glass substrates. Conditions for other substrates may vary
3. Cure using a mercury "H" bulb at 9J/cm<sup>2</sup>  
Note: Pixelligent uses a Dymax EC-5000 system and cures films for 180 seconds at 50mW/cm<sup>2</sup>
4. Post-bake at 120°C for 3 minutes in air

### Typical Data from Spin-Coated Films



<b>%T</b> Lambda 850 UV-Vis spectrometer	>95%
<b>RI @ 633nm</b> Metricon prism coupler	1.73
<b>Abbe Number</b>	37.4
<b>Viscosity (typical)</b> Brookfield viscometer TC650	500 – 2500 cPs

