

The PixCor™ Difference

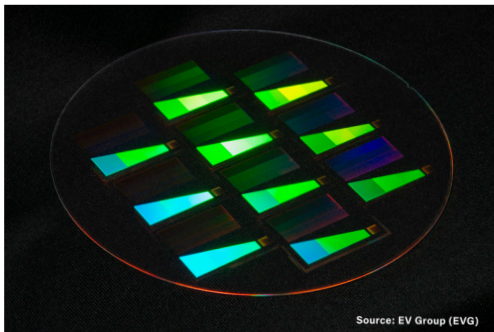
PixCor™ has been developed to the same exacting performance standards as Pixelligent's PixNIL® formulations, with the added benefit of improved UV stability for more demanding applications. This originates from a proprietary PixClear® Zirconia shell that surrounds the PixClear® Titania particle while still delivering high refractive index, low haze, and high transparency needed to enhance optical performance of Extended Reality (XR) devices.

Broad Compatibility

- » Glass & plastic substrates
- » Industry-standard manufacturing
- » Commercially available NIL stamps

Target Applications

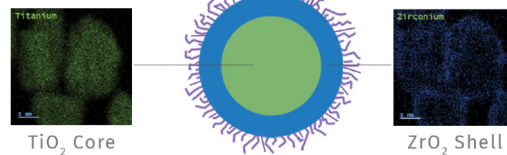
Nanoimprint lithography (NIL) and high refractive index thin films for a variety of Extended Reality (AR/MR) applications.



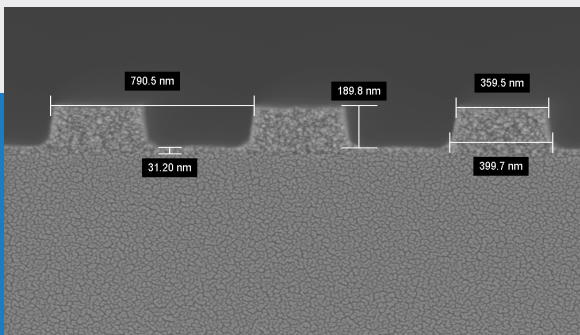
Features of PixCor™ Enabled HRI Nanoimprintable Formulations

- » Refractive index (RI) of >1.85
- » High transparency (>95%) and low haze (<0.1%) across all visible wavelengths
- » Reduced yellowing under UV exposure with >85% improvement in light stability when compared to titania
- » Reduced RI and film thickness change under UV exposure
- » Excellent structural fidelity
- » Cost effective & scalable process

PixCor™ Core-Shell Technology

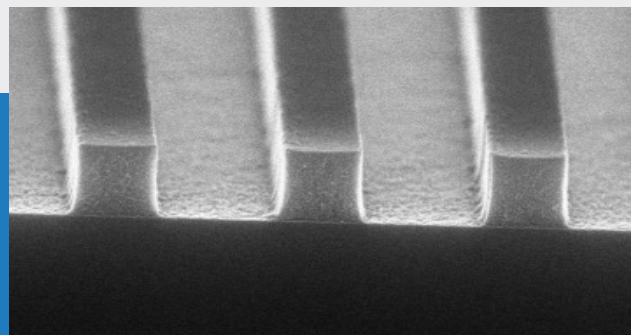


PIXCOR™ ENABLED NIL STRUCTURES



scale: 100 nm

Results Courtesy of EV Group



scale: 200nm

Results Courtesy of UMass

Technical Data

PIXCOR™ ENABLED NIL FORMULATIONS

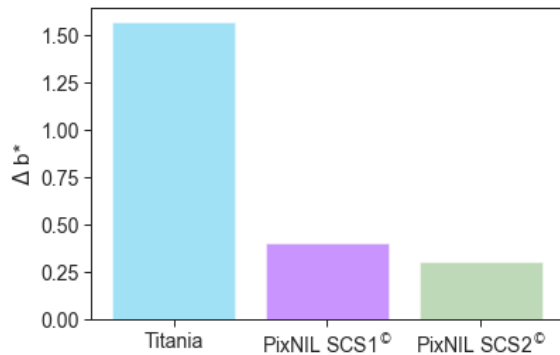
Specifications

PRODUCT	SOLVENT	FILM RI	FILM THICKNESS RANGE	HAZE%	RESIDUAL LAYER THICKNESS	CURING
PixNIL® SCS1	Yes	1.86	150-500nm	<0.1%	<30nm	UV
PixNIL® SCS2	Yes	1.88	150-500nm	<0.1%	<70nm	UV

Note: Specifications measured at 520nm.

Δb^*

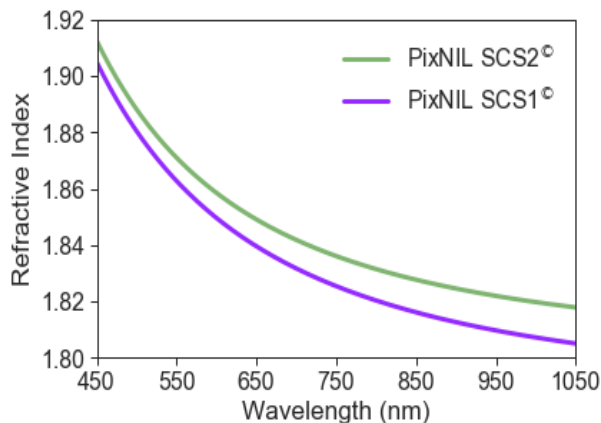
PixCor™ Δb^* after 405nm UV exposure



PixCor™ enabled PixNIL® products have demonstrated **excellent nanoimprintability** with **leading NIL tool manufacturers**. PixCor™ delivers **high aspect ratios (6:1)** and clarity, which **improves optical fidelity and image quality** for XR devices.

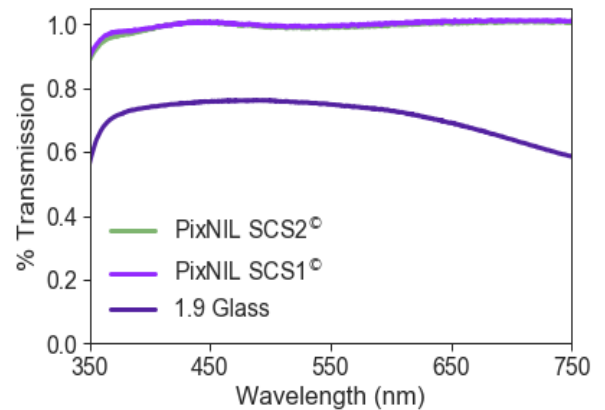
RI

PixCor™ Ellipsometer Curves



%T

PixCor™ Transmission on 1.9 Glass



About Pixelligent

Pixelligent is a developer of industry-leading PixJet®, PixNIL®, PixCor™, and PixClear® Designer Compounds®. We create and manufacture advanced nanomaterials that deliver the highest refractive index, robust mechanical properties, and near-perfect transparency for next-generation displays, XR devices, and sensors.

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