pixelligent
THE CLEAR SOLUTION®

# PixCor™

## Enabled PixNIL® Formulations

## The PixCor™ Difference

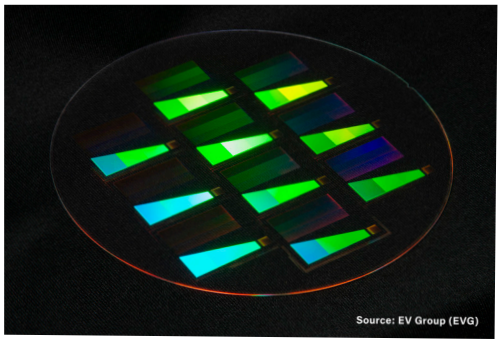
PixCor™ has been developed to the same exacting performance standards as Pixelligent's PixNIL® formulations, with the added benefit of improved UV stability for more demanding applications. This originates from a proprietary PixClear® Zirconia shell that surrounds the PixClear® Titania particle while 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

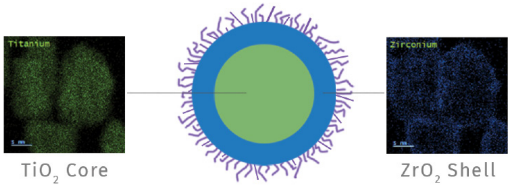
Nanoimprint lithography (NIL) and high refractive index thin films for a variety of Extended Reality (AR/MR) applications.



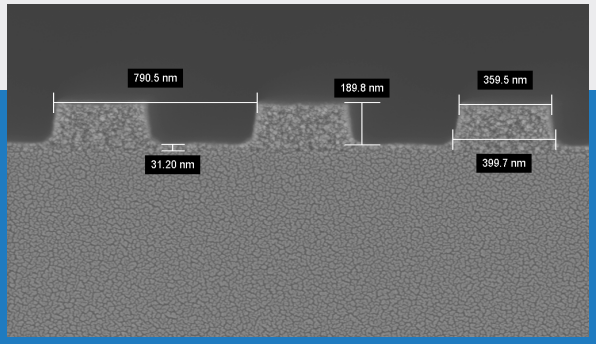

## Features of PixCor™ Enabled HRI Nanoimprintable Formulations

- 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

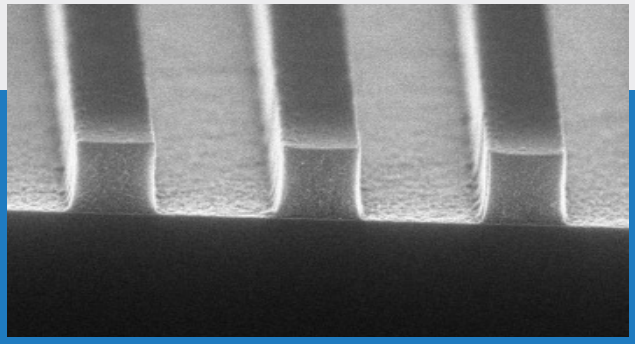



## PIXCOR™ ENABLED NIL STRUCTURES




scale: 100 nm

*Results Courtesy of EV Group*



scale: 200nm

*Results Courtesy of UMass*

marketing@pixelligent.com

www.pixelligent.com

# Technical Data

PIXCOR™ ENABLED NIL FORMULATIONS

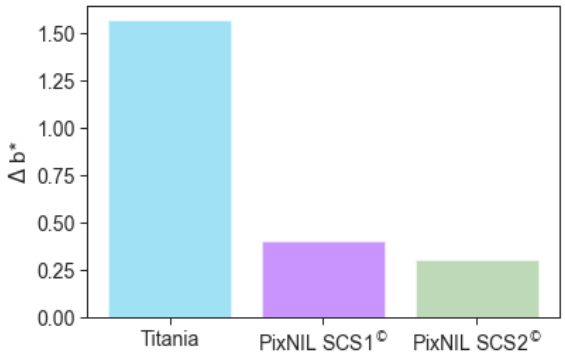
## Specifications

| PRODUCT | SOLVENT | FILM RI | FILM THICKNESS RANGE | HAZE% | RESIDUAL LAYER THICKNESS | CURING | CORE-SHELL SIZE |
|---|---|---|---|---|---|---|---|
| PixNIL® SCS1 | Yes | 1.86 | 150-500nm | <0.1% | <50nm | UV | 25nm |
| PixNIL® SCS2 | Yes | 1.90 | 150-500nm | <0.1% | <100nm | UV | 25nm |

*Note: Specifications measured at 520nm.*

## Δb*

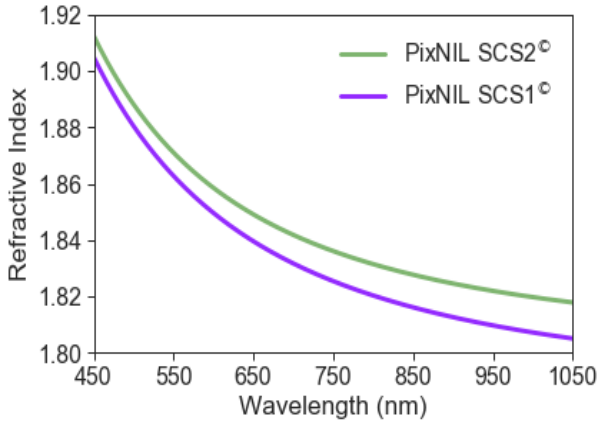
*PixCor™ Δb* after 405nm UV exposure*




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.

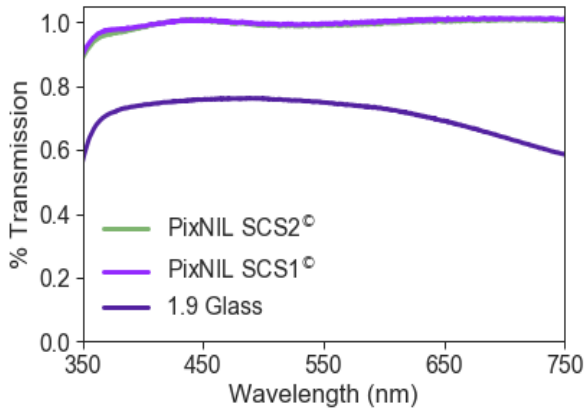
## RI

*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 that deliver the highest refractive index, robust mechanical properties, and near-perfect transparency for next-generation displays, XR devices, and sensors.

## Contact Us

(443) 529-8310
marketing@pixelligent.com
www.pixelligent.com

*6411 Beckley St.*
*Holabird Business Park*
*Baltimore, MD 21224*