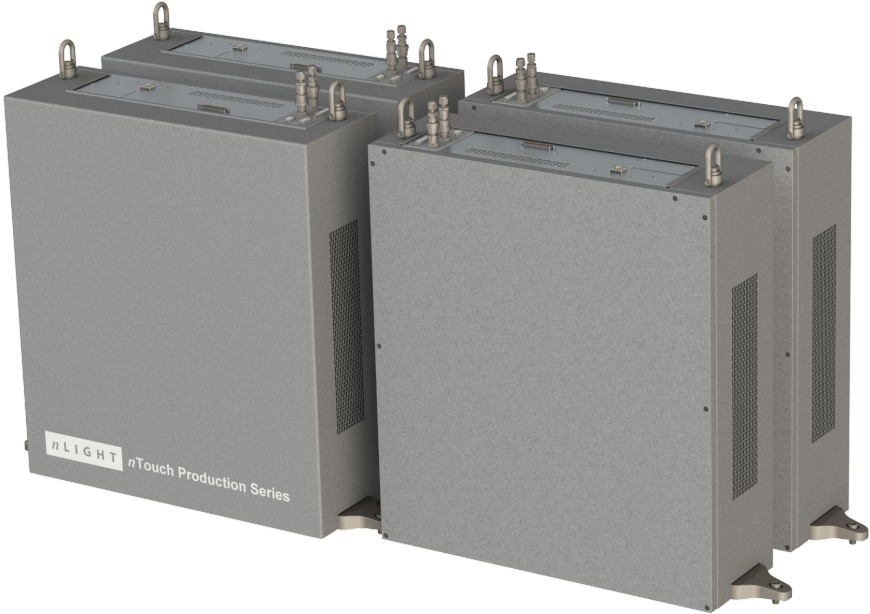




# nTouch™ TFP Modules



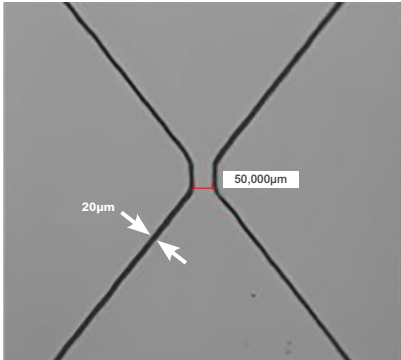
TFP Modules enable equipment makers to accelerate their growth in the thin film patterning market. Thin films coated with metal conductors and transparent conductors need to be patterned for many markets, including touch sensor modules, displays, flexible electronics, photo-voltaics, and the-internet-of-things sensors for wearable, medical and automotive.

nTouch™ TFP Modules are optimized for the high growth Touch Sensor market. They include a proprietary picosecond laser and scanner, beam shaping optics and software suite to produce the lowest cost touch sensor patterning solution when integrated into a partner's tool platform.

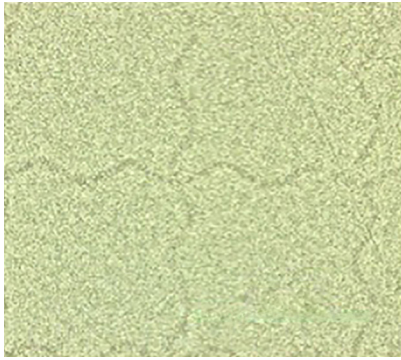
Parameter	Performance
Transparent Conductor Patterning Solutions	ITO, AgNW, TCTF
TC Pattern Invisibility	Best-In-Class
Conductor Metal Trace Resolution	< 20µm line / 20µm space
Patterning Area, maximum	600mm x 600mm
Substrates	Film (sheets or rolls), Glass

# Process Proven

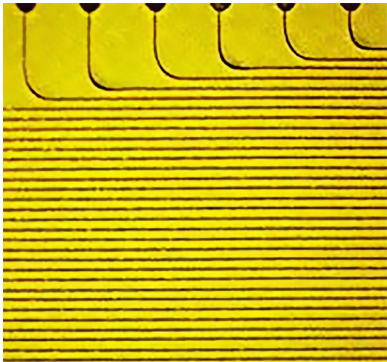
Laser patterning enabling your competitive advantage



ITO on Glass or PET

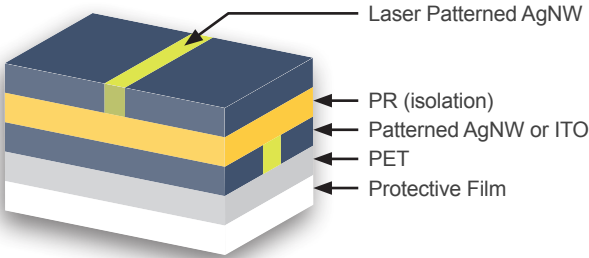


AgNW on Glass or PET



Metal Trace on Glass or PET

- <math><20\mu\text{m}</math> line / <math>20\mu\text{m}</math> space standard
- <math><15\mu\text{m}</math> line / <math>15\mu\text{m}</math> space in development



One Film Solution (OFS)