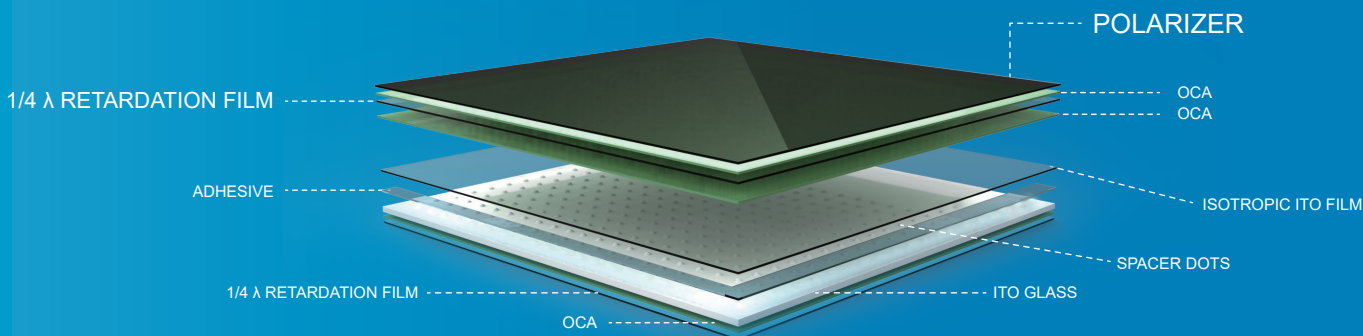


## Sunlight Readable Resistive Touch Solution

A modification of our 5-wire resistive technology suitable to be used in full outdoor applications, where bright sunlight can potentially make the screen unreadable. Higgstec's **Sunlight Readable** solution dramatically reduces reflectance and increases contrast ratio, while also preventing birefringence when the screen is viewed through polarizer sunglasses, making it a popular choice for military, automotive and other outdoor use applications.

A polarizer and two layers of 1/4 wavelength retardation film are added to the stack up of our 5-wire resistive touch panel. In addition, the ITO coated film is made from non-PET isotropic material. When an incoming light ray passes through the touch panel it is transformed from unpolarized light into circular-polarized light. Then as it is reflected, it is transformed again from circular-polarized light into linear-polarized light. The light ray is unable to pass back through the front polarizer, and internal reflection is eliminated.



### Benefits of Higgstec Sunlight Readable Solution

#### Optical

Polarizer design dramatically reduces reflectance and increases contrast ratio, improving readability in outdoor applications.

#### Durability

Tested for up to 35 million touches. High temperature production process ensures excellent durability even in harsh operating temperatures.

#### Operation

Precise linearity, stable and no drifting. Versatile input: fingers, gloves, passive stylus. No false touches caused by water or dirt.

#### Mechanical

5-wire resistive design ensures stability and long-lasting functionality even if surface is scratched or broken.



High temperature production process for ultra-durability



Soldered FFC tail for excellent pulling strength



FPC tail can be customized for length, location and shape.

**TOUCH PANEL SPECIFICATION**

Size Range	12.1" (standard)	3.5" – 24" (customized)
<b>Optical</b>		
Light Transmittance	73% ±3% (Measured by BYK-Gardner)	
<b>Mechanical</b>		
Input Methods	Finger, glove or passive stylus	
Number of Touches	Single	
Touch Activation Force	R0.8 Stylus ≤ 80g	
Surface Hardness	≥ 2H standard or greater upon request	
Tail Options	FFC tail or FPC tail. Customize tail length and location.	
Customization Options	Solar resistance, privacy filter, EMI-shielding, anti-glare, anti-reflection, hard-coated film	
<b>Electrical</b>		
Linearity	X ≤ 1.5%, Y ≤ 1.5%	
<b>Reliability</b>		
Operation Temperature / Humidity	-10 ~ +70°C	20%RH ~ 85%RH
Storage Temperature / Humidity	-40 ~ +80°C	20%RH ~ 90%RH
Knock Test	10,000,000 times (For military, automotive, high standard applications could reach 35,000,000 times with special materials)	
Compliance	CE, FCC, RoHS, REACH	
Warranty	2-year limited warranty	
<b>Controller*</b>		
Interface	USB / RS232 / COMBO	
Power Requirements	3.3~5V DC, 100mA typical	
OS Supported	Windows, Android, Linux, Mac, QNX	

*\*Typical values, various controller solutions available*