

Films for Touch Screen Applications

Advanced Film Component Solutions for Touch Screen Technology

Flexvue™ films are designed to improve reliability and optical performance while lowering the cost of ownership for touch-enabled devices. Industry-leading transparent conductive films increase yields and reduce assembled product warranty claims. Unique abilities include index matching colors, hiding etch patterns, and producing crystalline sputtered ITO on films. Leveraging over 50 years of experience allows us to produce films with higher VLTs and greater contrast ratios – making the displays that use touch panels clearer and easier to read. These technologies are unparalleled in the industry.

PROVEN SOLUTIONS FOR TOUCH SCREEN APPLICATIONS

Transparent Conductive Films

Optically-clear Indium Tin Oxide (ITO) and alternative Transparent Conductive Oxides (TCO) are used in all electronics applications that demand high levels of reliability, consistency and mechanical integrity. Utilized as a conductive or electrode layer in touch screens and various electronic displays, these films offer high visible light transmission, low haze, high durability, and a wide range of resistances.

Invisible ITO and Neutral Color ITO Films

Flexvue industry leading Invisible ITO is ideally suited for the latest-generation touch screen applications that require conductive patterns. By completely eliminating the appearance of etched lines, Invisible ITO enables thin, light weight projected capacitive and resistive multi-touch touch screens. Flexvue proprietary Neutral Color ITO eliminates the yellow color present in ITO coated film while offering high visible light transmission (VLT), superior clarity and color accuracy, excellent linearity, and enhanced durability.

Durable / Crystalline ITO Films

Touch screen applications demanding reliable performance in harsh environment and heavy use conditions rely on the unrivaled stability of Flexvue

Crystalline ITO. These products offer unbeatable resistance stability in high temperature and high humidity environments. They also remain flexible to resist ITO cracking resulting from scribes and/or point activations.

Shielding Films

Low ohm shielding films defend against electromagnetic interference (EMI) and infrared (IR) light transmission. Flexvue offers a wide selection of both silver based and non-silver based shielding films to meet the demanding requirements of high end touch screens applications.

Anti-Reflective Films

Where reflection is a problem, touch screen manufacturers rely on the unsurpassed performance of Flexvue anti-reflective (AR) coated films. In addition to improving sunlight readability, our AR coated films offer exceptional surface hardness for extreme durability. Anti-static properties are offered to reduce dust collection.

Hard Coated Films

Where surface protection is required, we offer a variety of hard coated films with a wide range of haze, gloss, and transparency levels, as well as innovative weatherable UV blocking options.

► History

Leveraging over 50 years of product development and manufacturing experience, Solutia's specialty films are used in applications such as:

- Touch screen
- Electronic displays
- Energy products
- Medical devices
- Solar control window film

► Capabilities

State of the art, large scale roll-to-roll coating and laminating, vacuum metallizing and sputtering, and deep dyeing capabilities.

► Research and Development

Integrated lab and pilot scale development facilities and R&D staff with more than 150 patents issued.

► Custom Products

Solutia can deliver custom solutions for your specialty film requirements. Our manufacturing capabilities can be adapted to handle unique application needs including coating chemistry and substrate type.

FLEXVUE™
FILMS WITH TECHNOLOGY INSIGHT

Product Overview

Product	Features	Attributes	Benefits
TRANSPARENT CONDUCTIVE FILMS	Wide range of resistances	2.5 - 1000 ohms / square	Adaptable to a wide range of applications as needed
	Available on various hard coated and heat stabilized base films, PET, and PEN	Anti-glare and clear hard coated base films available	Provides specific levels of haze, smoothness, and VLT
	High VLT	VLT > 94%	Improved optics
	Haze options	Haze < 1% - 10%	Improved optics
DURABLE / CRYSTALLINE ITO FILMS	High temperature / high humidity stability	R/Ro 0.9 - 1.0 60° C at 90% RH for 500 hours	Improved linearity
	High dry temperature stability	R/Ro 0.9 - 1.0	Improved linearity
INVISIBLE ITO FILMS	Multi-layer coating that matches the appearance of etched and non-etched areas	VLT > 88%	Creates a uniform appearance by hiding etched patterns
NEUTRAL COLOR ITO FILMS	Multi-layer coating that shift the b color value of touch screens to neutral	b star color value -3 to 0	Eliminates the yellow color on touch screens
SHIELDING FILMS	Low ohm / high transmission	2.5 - 10 ohms / square	Excellent attenuation with high VLT
	Non-corrosive	15 - 30 ohms / square	Excellent attenuation in corrosion promoting environments
ANTI-REFLECTIVE FILMS	Conductive and non-conductive sputtered films with optional anti-smudge coating	94% VLT, < 0.5% reflection, < 1% or 7% haze, 3H pencil hardness	Improved sunlight readability and enhanced contrast
HARD COATED FILMS	Wide range of clear and anti-glare films	Haze < 1% to 10%, > 90% VLT, to 4H pencil hardness	Durability where surface protection is required

Evaluation samples and technical support are available.
 For general information, pricing, and availability, please contact our sales department.
 Telephone: 1-888-273-4567 or 1-314-674-3150 outside U.S.A.
 E-mail: info@flexvuefilms.com

www.flexvuefilms.com

Notice: Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as to the date hereof, Solutia Inc. and Flexvue makes no representations or warranties as to the completeness or accuracy thereof and assumes no obligation to update any of the information. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Solutia Inc. be responsible for damages of any nature whatsoever resulting from the use or reliance upon information or the product to which information refers. Nothing contained herein is to be construed as a recommendation to use any product, process, equipment or formulation in conflict with any patent, and Solutia Inc. makes no representation or warranty, expressed or implied, that the use thereof will not infringe any patent. NO REPRESENTATIONS OR WARRANTIES, EXPRESSED OR IMPLIED, OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.



© Solutia Inc., St. Louis, Missouri, USA. All rights reserved. Solutia® is a trademark of Solutia Inc. Flexvue™ and Flexvue Logo™ are trademarks of Solutia Inc. All text, graphic, and image rights reserved. (05/11)