

Accentia® 430300P Patterned ITO Coated Films

Description

Sheldahl's ACCENTIA® patterned ITO products add the feature of customer designed patterning of transparent electrically conductive thin Indium Tin Oxide (ITO) coatings on polyester films. Sheldahl's high technology roll to roll patterning process provides customized solutions for projective capacitive touch sensors, smart windows, flexible OLED displays, and flexible solar cell applications.

Features

- High stability, optically clear PET films.
- Uniform ITO coating with superb transmission and color properties.
- Precise high resolution patterning process.
- High volume roll to roll process.
- Product provided in wide roll widths
- Specialty protection films, adhesive and hard coats available as custom options.

Constructions

- **Film Thickness:** 2, 5 and 7 mil (50, 125, 175 μ m) optically clear heat stabilized PET films. 2 and 3 mil (50, 75 μ m) heat stabilized PEN films are available as custom order.
- **ITO Resistance Offered:** 60, 100, 200, 250, 300 Ω/\square Standard. Other resistance offered as special order.
- **Product Format:** Available as rolls or sheets with optional protection film applied to one or both sides, optically clear PSA, and interleaf options.
- **Width:** Standard roll widths are to 330mm (13") wide, and 435mm (17.125") on 6" ID plastic cores. Other product widths and core IDs are available.

Shelf Life and Storage

Shelf Life is > 1 year when kept at ambient conditions of 21°C and 50% RH in original unopened container.

PB255B – 430300P – March 30, 2008



Quality

Sheldahl Technical Materials has been an industry leader in the coating of flexible films for over 50 years. Sheldahl products are manufactured using quality systems that conform to ISO9001 and TS-16949 quality standards. Key product characteristics are tested and monitored in accordance with applicable industry and strict internal standards. Certifications are available with product shipments.

Ordering Information:

When ordering please specify:

- Film thickness
- ITO resistance
- Product roll width
- Patterning schematic and/or appropriate CAD file.
- Applicable custom requirements

Contact Information:

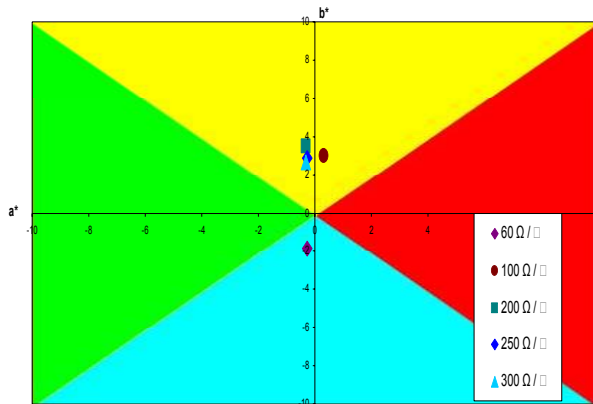
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Accentia 430300P Patterned ITO Coated Films Typical Product Characteristics:

Property	Units	60 Ω	100 Ω	200 Ω	250 Ω	300 Ω	Test Method
Average R_s	Ohm/sq	55 - 60	93 - 106	191 - 220	241 - 268	291 - 317	Four-Point Probe
%T @ 550nm	%	80 - 83	77 - 79	83 - 84	84 - 85	85 - 86	ASTM D1003
L*	%	92 - 93	91 - 91	93 - 93	94 - 94	94 - 94	ASTM D1003
ITO Adhesion	Level	5B	5B	5B	5B	5B	ASTM D3359
Haze	%	0.5 - 0.7	0.4 - 0.7	0.4 - 0.7	0.3 - 0.9	0.5 - 0.7	ASTM D1003
Etch	Seconds	59	34	20	15	<15	10% HCl
Heat Resistance	% ΔR_s	1	1	1	5	5	130°C for 3 hours
Alkali Resistance	% ΔR_s	10	10	10	10	10	5% NaOH 5 minutes
Adhesion Resistance	% ΔR_s	< 1	< 1	< 1	< 1	< 1	Scotch Tape Test
Abrasion Resistance	% ΔR_s	5	5	5	5	5	2 #/ 25 Cycles
RH Resistance	% ΔR_s	5	5	5	5	5	60°C / 90% RH 100 hrs
Flex Resistance	% ΔR_s	< 1	< 1	< 1	< 1	< 1	1K Cycles 1/4" Mandrel

Color Chart (a* and b*)



Sheldahl %Transmission per ITO Resistance - Visual spectrum

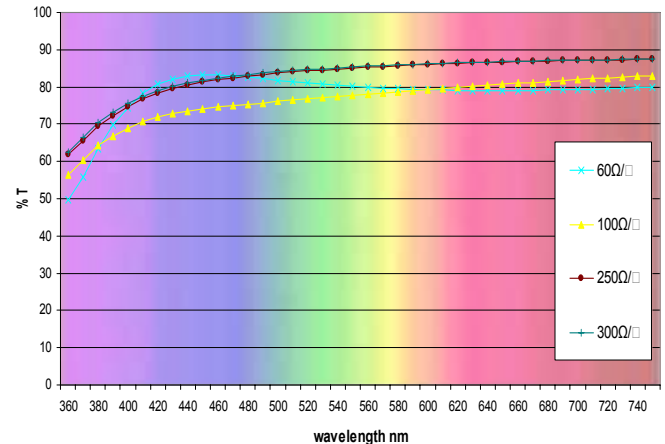


Photo Lithography (ITO)	Capability
Resolution	$\geq 50 \mu\text{m}$ lines/spaces
Edge Profile	Smooth
Pattern Size	Up to 410 x 600 mm
Screen Printing	
Line Width	$> 175 \mu\text{m}$
Registration (Ink to ITO)	$\pm 150 \mu\text{m}$
Production Capability	
Index Matching Layers	Available
AR Coatings	Available
Hart Coat	Available
Assembly Options	
Bonding Layers	Available
Final Assembly	Available