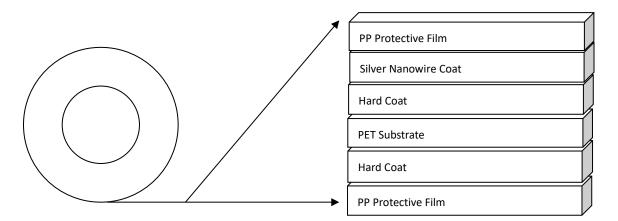


Product Type

Part Number: NF-CT-60S-125U-P7D Sheet Resistance: 60ohm Width: 1240mm/1340mm

Product Structure

Winding Direction:



Product Specification

Test Items		Unit	Specification	Test Instrument & Methodology	
Dimension	Width	mm	1240/1340±5	Gauge	
	Disclaim area	mm	5*2	Gauge	
	Thickness	um	130±5	Gauge	
Optical Characteristic	Transmittance	%	≥89%	hunterlab	
	Haze	%	≤2.1%	hunterlab	
	Color index (b*)	-	≤2.2	hunterlab	
Electrical	Sheet Resistance	Ω/□	60±10	Four points proba	
Characteristic	Resistance uniformity	-	≪15%	Four-points probe	

Test Items		Unit	Specification	Test Instrument & Methodology
Shrinkaga Pata	MD direction	%	<1%	JISK 7133(150℃60min)
Shrinkage Rate	TD direction	%	<1%	
Adhesion	AgNW layer	-	5B	Cross-cut test Cross-hatch tester; 3M (610) tape
Pencil Hardness	AgNW layer	-	НВ	JISK5600(Load 500g)



H/C layer	-	1H	JISK5600(Load 500g)

Product Reliability

Channel Reliability Test

Test Items	Test Sample	Test Condition	Specification
High Temperature High Humidity	OCA release liner	85℃ 85%RH 240hrs	
High Temperature Storage	OCA	80 ℃ 240hrs	Resistance variation
Xenon Aging	Conductive film OCA: 3M 8146/8305 HG 7335-H	1000W/m2@250-1100 nm 240hrs	≦10%

Cosmetic Inspection

Inspection Condition:

- 1. Luminance: 800~1200 lux
- 2. View Angle: 45°
- 3. Inspection Distance: 35±5cm
- 4. Inspection time: 15±3s

Inspection Items	Criteria	Rank	Remark	
Spot Defect	D≤0.1mm; DS <u>></u> 10mm	Acceptable		
	0.1mm <d≪0.5mm DS<u>></u>10mm,N≪3</d≪0.5mm 	Acceptable	Sample size: 1m	
	D>0.5mm	Unacceptable		
Line/Scratch Defect	W≤0.02mm	Acceptable	Visual inspection Judge by gage	
	0.02mm <w≤0.05mm; L<5mm; DS≥10mm N≤2</w≤0.05mm; 	Acceptable		
	W≥0.05mm or L≥5mm	Unacceptable		

Product Storage Requirements

- (1) Keep product at temperature: 20±10℃; Humidity: 50%±20%RH. Avoid the environment with high temperature and high humidity.
- (2) Please place the product level to avoid crushing and stacking.

Handling Guidelines

(1) Please handle the product with gloves wearing. Please do not touch the conductive AgNW layer of the product once the protective film is released.



- (2) Please do not use hard objects to wipe the surface of the product, in order to prevent scratch.
- (3) The product can be used for laser etching, screen printing, and chemical etching processes. Please refer to Nuovo Film's application notes for process parameters.
- (4) Please use <u>neutral (acid-free) OCA</u> for lamination. During transportation, please use <u>acid-free</u> <u>protective film</u>.
- (5) Please ensure that laminating adhesive, frame glue, cover glass and printing ink, etc. used do not contain acids, sulfides (H2S, SO2, CS2, COS, S8, etc.), halogens, and other oxidizing substances.
- (6) After touch panel lamination, the FPC bonding area needs waterproof adhesive.
- (7) When supplement materials or core manufacturing processes change, be sure to conduct material compatibility tests in advance, following Nuovo Film's reliability test condition guidelines.