



**(Product Type)**

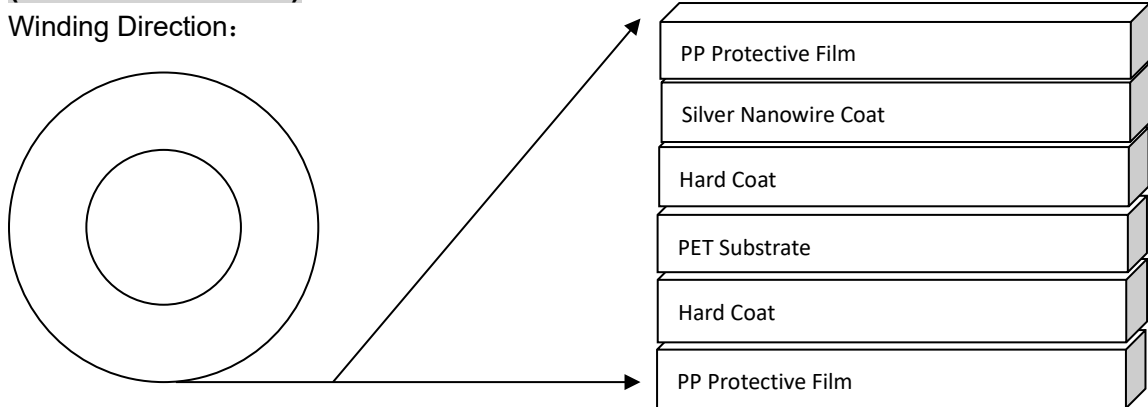
Part Number: NF-CT-25S-125U-P7W

Sheet Resistance: 25ohm

Width: 1240 mm

**(Product Structure)**

Winding Direction:



**Product Specification**

Test Items		Unit	Specification	Test Instrument & Methodology
Dimension	Width	mm	1240±5	Gauge
	Disclaim area	mm	5*2	Gauge
	Thickness	um	130±5	Gauge
Optical Characteristic	Transmittance	%	≥88%	hunterlab
	Haze	%	≤2.8%	hunterlab
	Color index (b*)	-	≤3.2	hunterlab
Electrical Characteristic	Sheet Resistance	Ω/□	25±5	Four-points probe
	Resistance uniformity	-	≤15%	

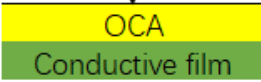
Test Items		Unit	Specification	Test Instrument & Methodology
Shrinkage Rate	MD direction	%	<1%	JISK 7133 (150°C60min)
	TD direction	%	<1%	
Adhesion	AgNW layer	-	5B	Cross-cut test Cross-hatch tester; 3M (610) tape
Pencil Hardness	AgNW layer	-	HB	JISK5600 (Load 500g)



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

**Channel Reliability Test**

Test Items	Test Sample	Test Condition	Specification
High Temperature High Humidity	OCA release liner ↓  OCA: 3M 8146/8305 HG 7335-H/7335-HL	85°C 85%RH 240hrs	Resistance variation ≤ 10%
High Temperature Storage		80°C 240hrs	
Xenon Aging		1000W/m <sup>2</sup> @250-1100 nm 240hrs	

**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≤0.5mm; DS≥10mm	Acceptable	Sample size: 1m  Visual inspection  Judge by gage
	0.5mm<D≤1.0mm DS≥10mm, N≤5 1.0mm<D≤1.5mm DS>10mm, N≤2	Acceptable	
	D>1.5mm	Unacceptable	
Line/Scratch Defect	W≤0.02mm	Acceptable	
	0.02mm<W≤0.05mm; L<5mm; DS≥10mm N≤2	Acceptable	
	W>0.05mm or L≥5mm	Unacceptable	

**Product Storage Requirements**

- (1) Keep product at temperature: 20±10°C; 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**



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- (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 neutral (acid-free) OCA for lamination. During transportation, please use acid-free protective film.
  - (5) Please ensure that laminating adhesive, frame glue, cover glass and printing ink, etc. used do not contain acids, sulfides (H<sub>2</sub>S, SO<sub>2</sub>, CS<sub>2</sub>, COS, S<sub>8</sub>, 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.



**Product Type**

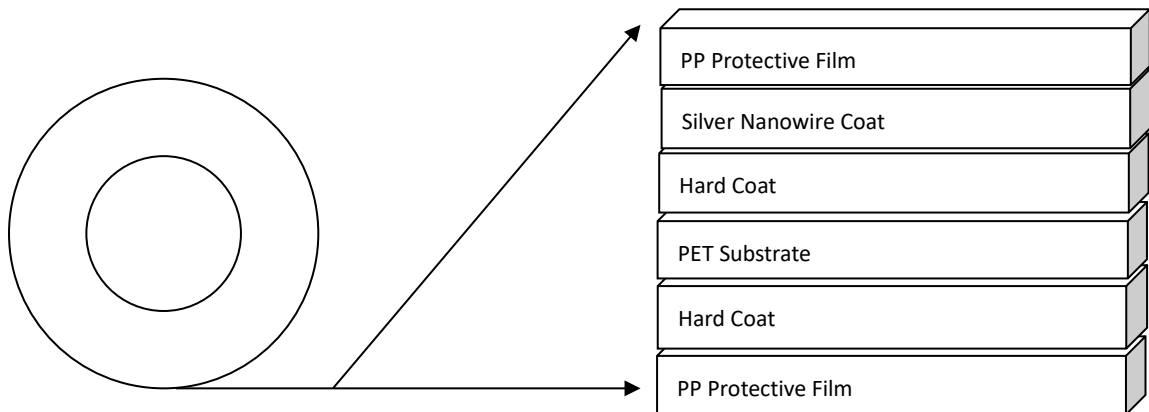
Part Number: NF-CT-25S-250S-P7W

Sheet Resistance: 25ohm

Width: 1240 mm

**Product Structure**

Winding Direction:



**Product Specification**

Test Items		Unit	Specification	Test Instrument & Methodology
Dimension	Width	mm	1240±5	Gauge
	Disclaim area	mm	5*2	Gauge
	Thickness	um	255±5	Gauge
Optical Characteristic	Transmittance	%	≥87%	hunterlab
	Haze	%	≤4%	hunterlab
	Color index (b*)	-	≤3.5	hunterlab
Electrical Characteristic	Sheet Resistance	Ω/□	25±5	Four-points probe
	Resistance uniformity	-	≤15%	

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Shrinkage Rate	MD direction	%	<1%	JISK 7133 (150°C60min)
	TD direction	%	<1%	
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