

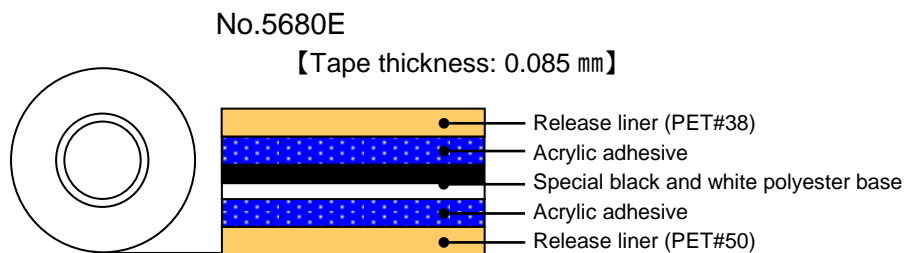
Double-coated adhesive tape

No.5680E

Outline

Nitto Denko No. 5680E is a unique double-coated adhesive tape that uses a special base with one white side and one black side. The tape achieves the dual function of blocking out and reflecting light. It adheres well to all sorts of substrates.

Structure



Features

- Uses a white/black-colored special base material. The white side absorbs hardly any light at all.
- Offers superior light shielding performance.
- The adhesive exhibits excellent bonding performance to various substrates.
- Halogen-free type. (We do not use chloride compounds on purpose for this product.)
- The ten hazardous materials restricted by the RoHS directive are not compounded.

Applications

- Fastening of LCDs and backlight modules
- Fastening and blocking light of backlight LEDs

Sizes

Tape thickness (mm)	Width (mm)	Length (m)
0.085	500	50, 100

For details, please contact us.

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Properties

● 180° peeling strength

		White side	Black side
Initial		15	17
Hot and humid environment (70°C x 85%RH)	500 hrs	15	16
	1000 hrs	17	16
Heat shock (-40°C <-> 80°C)	500 cycles	13	18
	1000 cycles	15	17

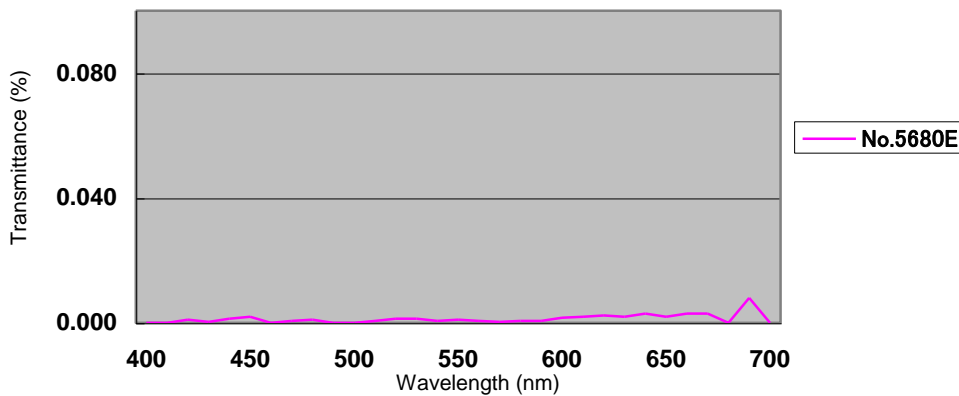
(Unit: N/20 mm)
Lining material: PET#25
Peeling angle : 180°
Application temperature: 23°C, 50% RH
Peeling speed: 300 mm/min
Application pressure: One pass back and forth with a 2-kg roller
Substrate: White side (PC)
Black side (glass)

● Optical properties

		No.5680E
Transmittance (%)		< 0.01
Chroma of white side	L*	92.40
	a*	-0.72
	b*	-1.41
Diffuse reflectance of white side (%)		82

Transmittance : 550 nm
Using integrating sphere spectro transmittance measuring apparatus
Chroma of white side: Using colorimeter Diffuse reflectance of white side: Using spectrophotometer

【Transmittance in visible light area】



● Shear strength

		No.5680E
Initial		800
Hot and humid environment (70°C x 85%RH)	500 hrs	860
	1000 hrs	860
Heat shock (-40°C <-> 80°C)	500 cycles	>1000
	1000 cycles	>1000

(Unit: N/20 x 20 mm)
Peeling angle: Shearing direction
Application temperature: 23°C, 50% RH
Peeling speed: 50 mm/min
Application pressure: One pass back and forth with a 5-kg roller
Substrate: Glass / stainless steel

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● Holding power

	No.5680E
Holding power	0.2

(Unit: mm)

Substrate: Phenol resin plate

Measurement method:

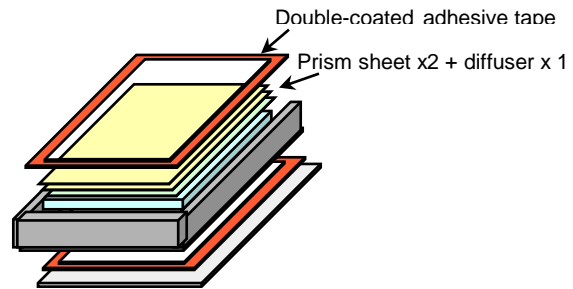
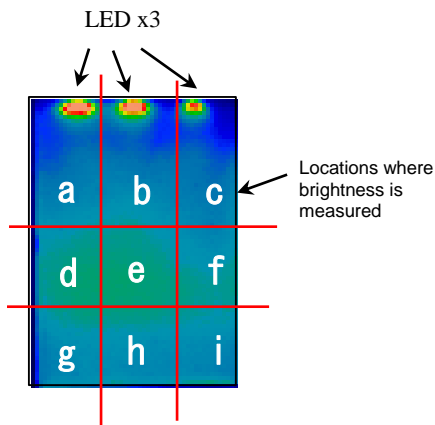
Deviation measured after a applying 500-g load for an hour in a 40°C atmosphere

● Effect verification with actual machine

Brightness measured using “no double-coated adhesive tape”, “black double-coated adhesive tape”, and “No. 5680E” with 2-inch backlight (3 LEDs).

【Measurement locations】 taken at 9 locations

【Measurement structure】



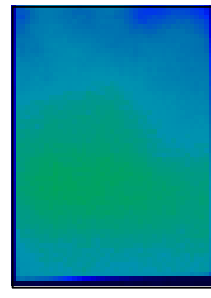
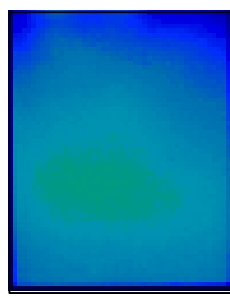
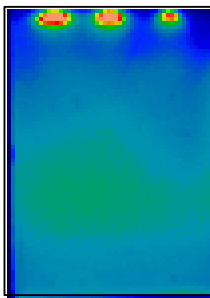
● Results of effect verification with actual machine

【Brightness pixel】

No double-coated adhesive tape

Black double-coated adhesive tape

No. 5680E



【Brightness at various locations】

773	788	753
1008	1016	911
915	932	901

711	724	639
944	972	858
847	888	867

802	807	776
1035	1042	946
974	988	981

Center brightness	1016
Max.	1016
Min.	753
Mean	889
Brightness blur (%)	74.1

Center brightness	972
Max.	972
Min.	639
Mean	828
Brightness blur (%)	65.7

Center brightness	1042
Max.	1042
Min.	776
Mean	928
Brightness blur (%)	74.5

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Precautions when using

- Remove all oil, moisture and dirt from the surface of the substrate before applying.
- The tape employs pressure-sensitive adhesive. Be sure to apply pressure with a roller or press when applying. Failure to do so could affect properties or appearance.
- The tape may not adhere well to significantly uneven or distorted surfaces. Level off the surface as much as possible before applying.
- It takes some time before the tape exhibits its full adhesive strength. Allow the tape to set for several hours before placing in a position or using in a manner that places stress on the tape.

Precautions when storing

- Be sure to keep the tape in its box when not using.
- Keep in a cool dark place not exposed to direct sunlight.

Safety precautions

 WARNING
<ul style="list-style-type: none">● Make sure the product is suitable for the application (objective and conditions) before attempting to use. The tape may come off depending on the substrate to which it is applied or conditions under which it is applied.● Use in combination with another method of joining if there is possibility of an accident.● Do not incinerate. Doing so may produce toxic gas or odor that can cause nausea if inhaled. The tape should be disposed of by a licensed contractor.

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