



POWELL
Our Protector, Your convey

info@powell.com

<http://www.i-powell.com>

Powell Technology Limited

RAW Material (Glass) Analysis

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一、 The introduction of tempered glass

Application Fields : Tempered glass is prestressing force glass, widely used in construction, tableware, automobile, digital and other industry products.

Theory : Through chemical or physical process, when the glass in a state of softening quickly move it to low temperature environment, make the interior of the glass produced outside of the tension, through contraction force balance increased flexibility and shock resistance of the glass.

二、 Commonly used glass brand

High end

- Schott
- Corning

Middle end

- Asahi
- Nippon Sheet

Low end

- Luoyang glass
- China Southern glass

Schott glass (High-end)

Origin: Germany

The thickness of the glass substrate : 0.2mm

Material : Aluminum calcium

Advantage: Good flexibility, good shock resistance

Disadvantage: High price

Corning glass (High-end)

Origin : American

The thickness of the glass substrate : 0.33 mm

Material : soda lime

Advantage: Good flexibility, good shock resistance

Disadvantage: High price

Asahi, Nippon Sheet Glass(Middle-end)

Origin : Japan

The thickness of the glass substrate : 0.33 mm; 0.4 mm

Material : soda lime

Features: the highest cost performance

Luoyang glass, China Southern glass (Low-end)

Origin : China

The thickness of the glass substrate : 0.33 mm; 0.4 mm

Material : soda lime

Advantage: cheap price

Disadvantage: process has low product purity , low softness

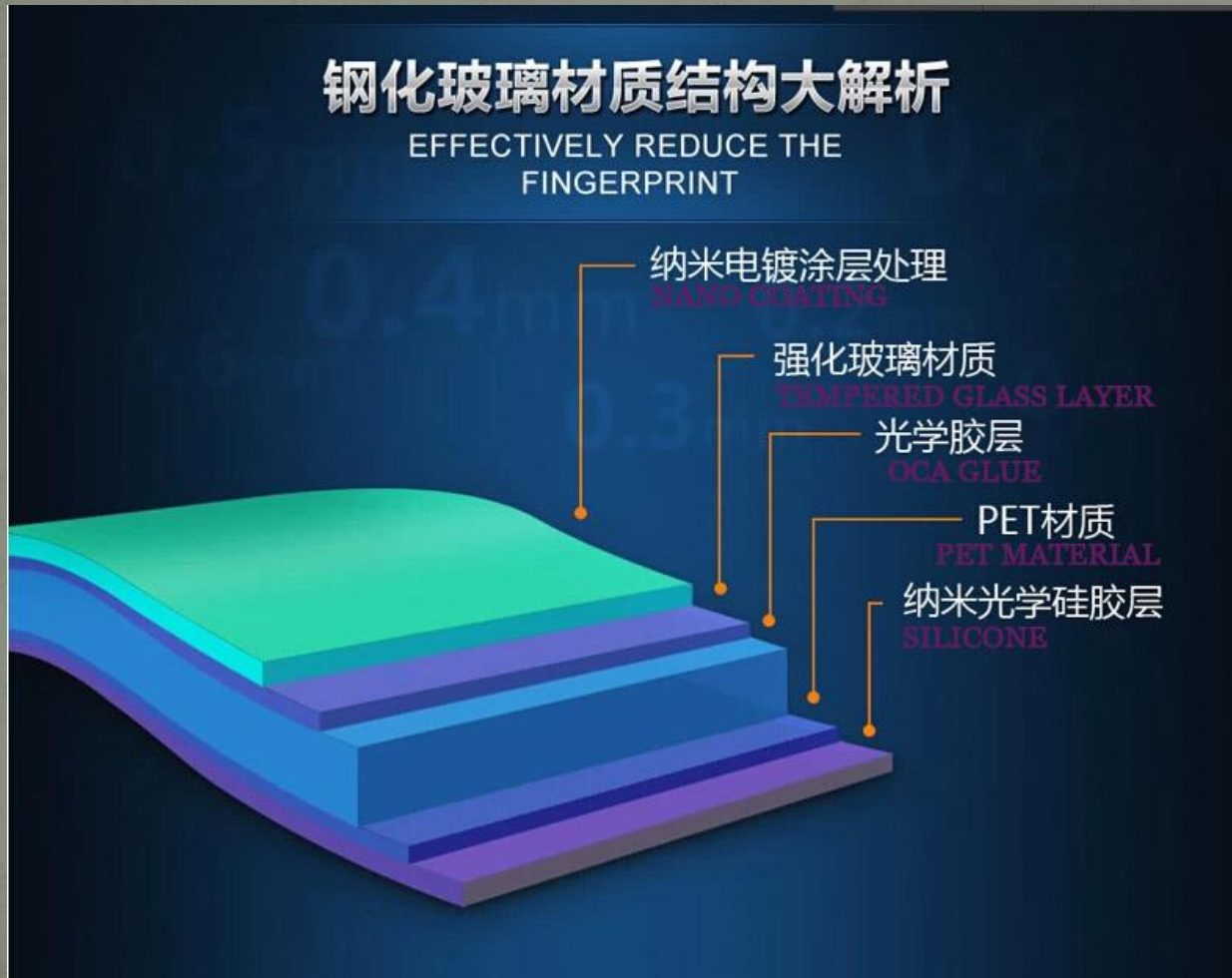
三、 The structure of the tempered glass screen protector

AF layer	Nano coating: 1. Anti dirty 2 . Smooth and sensitive touch feeling
Tempered glass layer	1. Good flexibility, good shock resistance, can be well protect phone screen and avoid broken. 2. Super hardness, anti-scratch 3. high transmission, original HD visual effect
AB adhesive layer	1. Easy to Laminating, Exhaust quickly and cleanly 2. When the glass shattered, debris is present to obtuse angles, not to injure people.

四、 The structure of AB glue

Release film
OCA glue (The surface laminating glass)
anti-explosion PET
Silicone (The surface laminating screen)
Release film

images parsing



五、 The advantages and disadvantages of traditional PET film and tempered glass film

traditional PET film

Advantage :

Cheap price, easy to processing, suitable for customization and mass production

Disadvantage :

1. Stick complicated and cost much time
- 2、 Easy to dirty, not anti-scratch
- 3、 low transparency, poor visual effects
- 4、 insensitive touch feeling
- 5、 Less anti-static, easy to cause cell phone blank screen, touch failure and so on situation.
- 6、 short service life

tempered glass film

Advantage :

- 1、 High transparency, original HD visual effect
- 2、 9H hardness, anti-scratch protect screen not easy to atomizing
- 3、 Better flexibility and shock resistance, effectively protect the phone's screen
- 4、 AF layer is Nano coating, anti-dirty , Smooth and sensitive touch feeling
- 5、 shielding part of the strong light, protect eyes
- 6、 Long service life

Disadvantage :

- 1、 2-3 times thickness than PET film
- 2、 cost is relatively high, Considering the service life comprehensive cost close to PET film
- 3、 Production complex high cost, not suitable for customization

六、 Testing method of tempered glass screen protector

1、 Professional Data

- a、 Glass test report (Dimension, The depth of the toughened, The resistance to bending stress, Resistance to dropping test)
- b、 Material specifications
- c、 SGS report、 ROHS report
- d、 AF Abrasion Resistance Test

2、 store demonstration

- a、 AF Abrasion Resistance Test and drip test
- b、 Steel ball drop test (30g/40cm four times)
- c、 Bending glass ; surface of AB glue big radian bending inwards

七, Contact with us:

1, Get samples:

Email: sales@i-powell.com

2, Ask our quotation:

Email: sales@i-powell.com

3, Want know more:

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