

## 光伏玻璃产品规格书

### Quality Specification of Solar Glass

#### Specification

Thickness: 1.6mm~4.0mm

Dimension: Max: 2000\*3000mm (annealed), 2000\*3000mm (tempered)

Edge: Arc

shape ground (C-Cut)

Corner: Cut Roughness:

0.3-1.2um

#### Basic information

Glass type Super white, patterned. Rolled

Glass form Raw, Tempered, AR coated, Back print, Hole drilling 3.2mm, 2.0mm, 4.0mm, 2.5mm

Applicable size 1298 X 2500mm (210 solar cell)  
 1128 X 2500mm (182 solar cell)  
 1033 X 2500mm (166 solar cell)  
 996 X 2500mm (158.75 solar cell)  
 986 X 2500mm (157 solar cell)

#### Chemical Composition

化学成分 Chemical Composition	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Na <sub>2</sub> O+ K <sub>2</sub> O	CaO	MgO	Fe <sub>2</sub> O <sub>3</sub>	Sb <sub>2</sub> O <sub>3</sub>	CeO	As <sub>2</sub> O <sub>3</sub>
比率 Rate	72~74%	>1.0%	≤14%	≤11%	≤4%	≤120ppm	≤0.2%	N.D.	N.D.

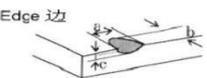
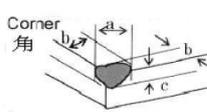
1. 光学特性

Optical Properties

类型 Type	项目 Items	标准 Standard	备注 Note
透射比 Transmittance	压花钢化玻璃面板 Tempered patterned glass	≥91.6%	测试标准按照 ISO9050:2003 执行; Testing standard according to ISO9050:2003(E) 透射比波段范围: 380~1100nm; Transmittance band range: 380~1100nm;
	压花镀膜钢化玻璃背板 AR-coating Tempered patterned glass	≥93.6%	

2. 质量属性

Quality Properties

类型 Type	项目 Items	标准 Standard			测试方法 Testing Method	
尺寸 Dimension	厚度公差 Thickness Tolerance	2.5~3.2mm: ±0.20mm	4.0mm: ±0.30mm		According to GB/T 34328 - 2017	
	厚薄差 Thickness Difference	2.5~3.2mm: ≤0.25mm	4.0mm: ≤0.35mm			
	尺寸公差 Dimension Tolerance	±1mm				
	对角线 Diagonal Tolerance	3mm				
	弯曲度 Overall Bow/warp	≤0.2%				
	波形度 Local warp	≤0.3mm/300mm				
外观 Appearance	线条、裂纹、霉变、结石 Lines, cracks, mildew, stones	不允许 Not permitted				
	气泡 Bubble	圆形气泡 Body Bubble	直径(mm) Diameter	L≤1	1 < L≤2	L>2
			允许数量 allowed	不计 No calculation	4*S, 个	0
		长形气泡 Long Bubble	长度(mm) Length	L≤1	1 < L≤3	L>3
			宽<1mm	不计 No calculation	3*S, 个	0
	开口气泡 Open Bubble	不允许 Not permitted				
	划伤 Scratches	长度(mm) Length	L≤10	L>10 或 W>0.5		
		宽度(mm) Width<0.5	2*S, 个	0		
		膜面划伤 Film scratch	长度(mm) Length	L≤30	L>30	
	膜面划伤 Film scratch	宽度(mm) Width≤0.2	2*S, 个	0		
		宽度(mm) 0.2< W≤0.5	1*S, 个	0		
		崩边 Edge Defect		1) a ≤ 3mm; b ≤ 3mm; c ≤ 2mm; 2) 每边不超过一处: less than 1 place each side;		
崩角 Corner Defect		1) a ≤ 3mm; b ≤ 2mm; c ≤ 2mm; 2) 每边不超过一处: less than 1 place each side;				

类型Type	项目Items	标准Standard	测试方法 Testing Method
钢化 性能 Tempering performance	抗冲击强度 Balling Test	3.2~4.0mm: 用 1040 克重表面光滑的钢球从 1000mm 高处自由落下, 玻璃不破碎 1040g steel ball, 1000mm, no breakage	According to GB 15763.2- 2005
	碎片颗粒数 Fragmentation	3.2~4.0mm: 50*50mm计数框内, 碎片数40粒至120粒, 最长碎片长度不能超过75毫米	
	热稳定性 Thermal Durability	0~200°C温差, 玻璃不破坏 0~200°C                      unchanged	
	耐风压 Wind Resistance	2400Pa in 1 hour, no crack	
镀膜性能 Coating performance	透光率 Light Transmittance (380~1100nm)	≥93.6%	According to JC/T 2170-2013
	铅笔硬度试验 Pencil Hardness	≥ 3H	
	膜层厚度 Film thickness	115±15nm	
	镀膜附着力 Coating Adhesion	Class 0	According to ISO9211-4:2012
	耐酸性测试 Anti - acid	测试后透光率衰减小于1% Transmittance Loss less than 1%	According to JC/T 2170-2013
	盐雾试验 Salt Spray	测试后透光率衰减小于1% Transmittance Loss less than 1%	According to JC/T 2170-2013
	恒温恒湿测试 Damp Heat test (double 85)	测试后透光率衰减小于1% Transmittance Loss less than 1%	
	紫外UV光试验 Exposure to UV Light	测试后透光率衰减小于1% Transmittance Loss less than 1%	
	耐磨性能 Wear resistance	测试后透光率衰减小于4% Transmittance Loss less than 4%	
	镀膜收边 Edge coating contraction width	≤7.0mm	According to GB/T 14915.1-2002
			According to JC/T 2170-2013

### 3. Parking & Storage

#### Parking

①

Wooden Pallet for both tempered glass and AR coating glass(horizontal storage)



②

Standard separation methods: paper for both tempered glass and AR coating glass.

#### Storage

①

Glass should be stored in warehouses with relative humidity less than 80%, temperature  $-15^{\circ}\text{C} \sim +40^{\circ}\text{C}$ . Storage process should strictly prevent rainwater immersion in packaging, moisture and dust, maintain ventilation and dryness, and prevent sunlight exposure.

②

The shelf life of plain toughened glass is 6 months and that of coated glass is 6 months. The starting date of the warranty period is the production date, and the goods can be guaranteed to the customer within 2/3 of the warranty period.