

GLAS SMART 1000

Portable on-site Comprehensive Measurement Instrument for Energy-saving Glass

Meet Standards: GB/T 36261-2018 On-site test technical condition and calculation for optical and thermal parameters of energy saving glass for building.

- Integral measurement
- Nondestructive measurement
- Field measurement
- WiFi connection
- Multiple standard computing

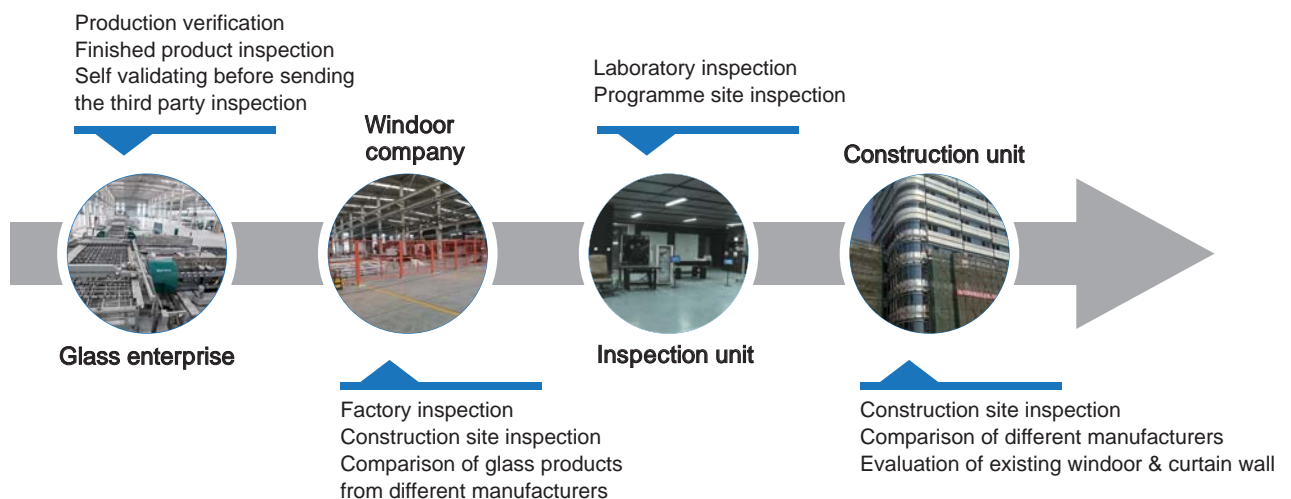
Is your glass energy saving?



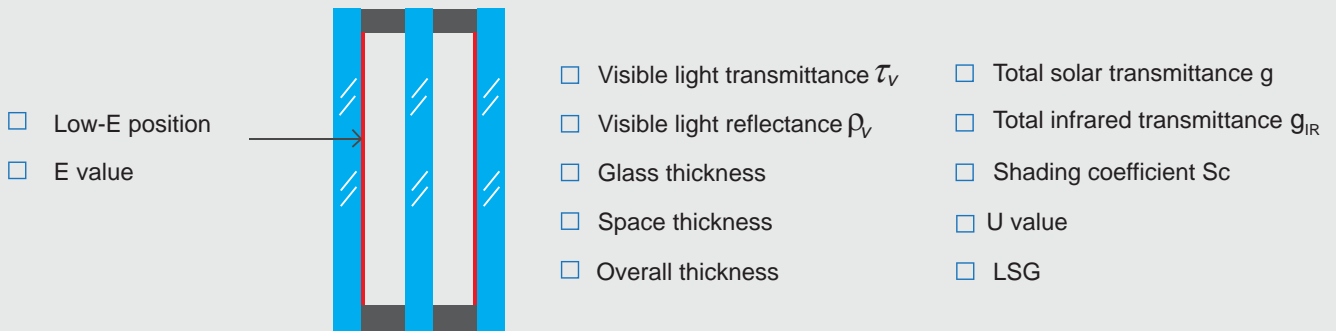
Introduction

GlasSmart1000 can quickly measure the glass structure, non-destructive test glass thermal insulation performance. It is especially suitable for testing and evaluating the performance of installed glass on engineering site, and verifying the consistency between large IG glazing and small sample. To help owners, consultant companies, construction and supervision units understand glass quality, and to help construction quality supervision departments and inspection agencies quickly determine whether glass is energy-saving and whether it meets local building energy-saving standards.

Field of application



Detectable index GlasSmart1000



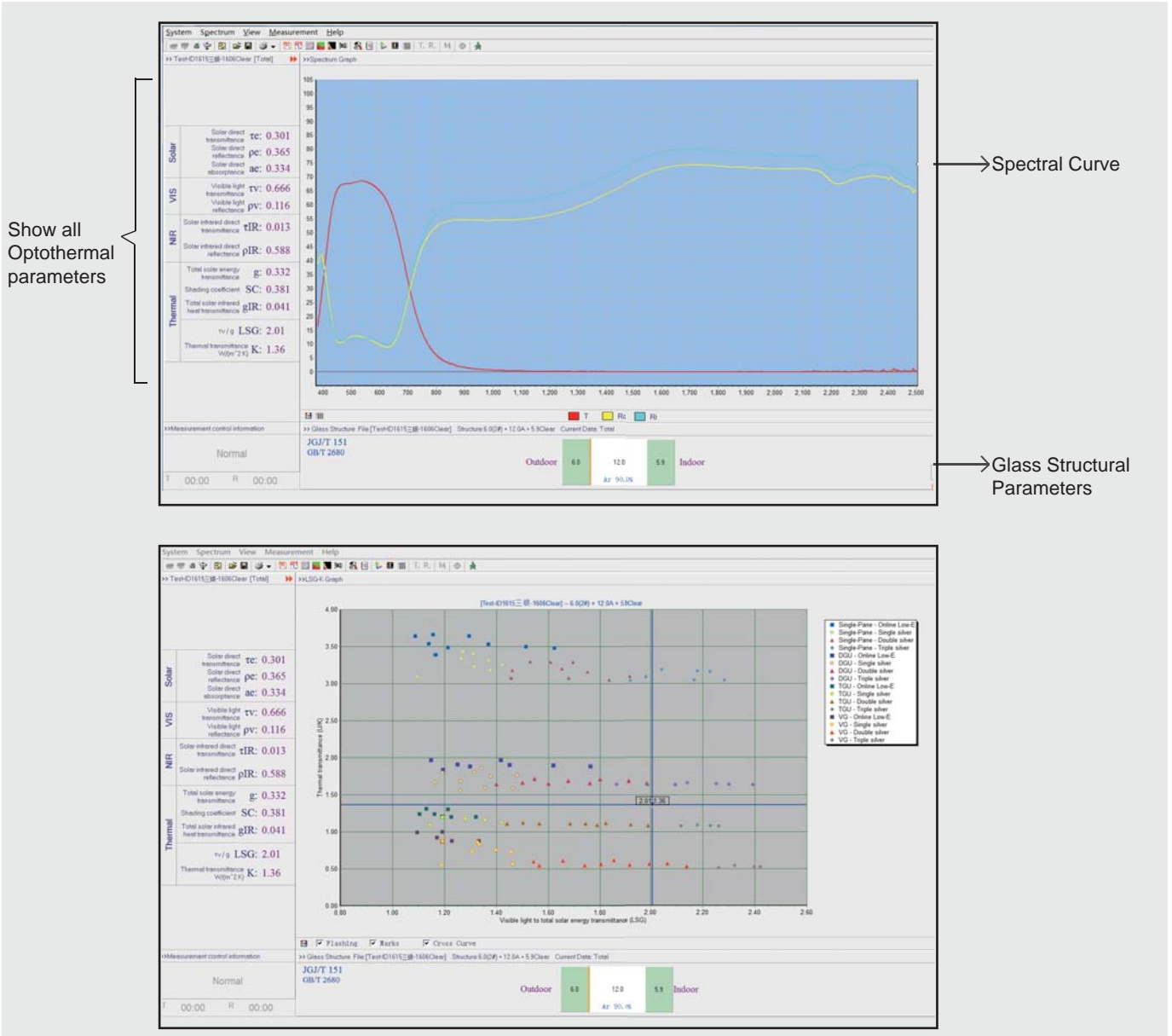
Standard basis GlasSmart1000

On May 1, 2019, the National Standard « GB/T 36261-2018 On-site test technical condition and calculation for optical and thermal parameters of energy saving glass for building » put into Implementation. The standard specifies the calculation parameters, test classification, test principle of basic parameters measurement requirements for optothermal energy-saving glass in the field test. It is applicable to the field test for optothermal parameters of energy-saving glass installed and to be installed. The standard breaks through the bottleneck that the optothermal properties of glass can only be tested in the laboratory, and can directly test all kinds of energy-saving glass installed in buildings. It solves the problem of inconsistency between the installed glass and the samples sent for inspection in the glass industry.



The GlasSmart1000 is independently developed by our company, which meets the requirements of GB/T 36261-2018. It can be used to measure the optothermal performance parameters of building energy-saving glass directly. The operation method is simple and fast. Each instrument can be traced to the Chinese Academy of Metrology to ensure the testing data accuracy.

Comparison with traditional methods GlasSmart1000



Main functional characteristics GlasSmart1000

- All basic parameters were measured*, spectrum transmission & reflection, thickness, Low - E side and E value.
- Standard calculation, complete set of optical and thermal parameters are calculated according to relevant standards.
- Nondestructive measurement, directly measure the optical and thermal parameters of IG.
- Field measurement, directly measure the installed glass.
- Guided measurement, a complete set of guided measurement, easy to use.
- Full - function software, complete the measurement and calculation of all parameters.
- Reliable result, the measurement value can be traced back to its source NIM (China National Institute of Metrology)
- Wireless connection, connected with computer by wifi, lithium battery power supply, suitable for site use.

* Note: Except for special structures.

Parameters GlasSmart1000

- Wavelength Range : 380nm ~ 2500nm.
- Interface : WiFi.
- Host lithium battery: 14.8V/5Ah, charging time is about 4 hours.
- Transmission head lithium battery: 14.8V/3Ah, charging time is about 3 hours.
- Duration working time: 3 hours (Intermittent work for about 8 hours) .
- Light source: halogen lamp.
- Measurement time: about 20 minutes.
- Glass types: installed or un-installed energy saving glass without scattering.
- Measurable glass thickness: 45mm.
- Power Supply: DC18V 5A.
- Operating environment: temperature -10°~40°, relative humidity <90%.

Measurable glass specification and parameter lists GlasSmart1000

Type of glass		Optical and thermal parameters							Type of testing	
		Visible light transmittance τ_v	Visible light reflectance ρ_v	Solar direct transmittance τ_e	Solar direct reflectance ρ_e	Solar infrared heat transmittance τ_{IR}	Total solar energy transmittance g	Thermal transmittance K		Total solar infrared heat transmittance g_{IR}
Single pane									Type	
Laminated glass									Type	
Uncoated insulated glass									Type	
Coated double pane glazing	Coating on both sides and below								Type	
	Coating on more than two sides						x	x	x	Type
Coated multiple-cavity glazing	Coating on both sides and below								Type	
	Coating on more than two sides						x	x	x	Type
Vacuum glazing							x	x	x	Type

Note1:√——Meaning applicable ; ×——Meaning inapplicable.

Note2: The test of optical parameter is not suitable for scattering characteristic glass, such as patterned glass, frosted glass, enamelled glass, etc.

Note 3: The table is from the standard GB/T 36261-2018 On-site test technical condition and calculation for optical and thermal parameters of energy saving glass for building.

Note 4: Type I means the building glass test which can directly test all the optothermal parameters by non-destructive testing method on site.

Type II means the building glass test, which just directly test the optical parameters by non-destructive testing method on site, but can not directly measure the thermal parameters.

Remark:Aoptek reserve the right to modify the information, please refer to the actual instrument & manual as final edition.