

SGLASS

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SGLASS.SI



SGLASS.SI[®]



SGLASS SMART FILM is one of the biggest European leaders in the field of smart film and smart glass technologies. Focused on the research, development, manufacturing and marketing of vision and light control technologies that support safe, sustainable, comfortable, unique, innovative and agile user experiences in various industries.

SGLASS is located in Ljubljana, Slovenia, with more than 5 years of experience in the field of smart products, we have worked on some of the biggest projects in Slovenia and abroad. Our vision is to provide quality to our customers and together with our various partners offer you the best innovative products and services.

Our mission is to create surfaces, systems and solutions that are smart and multifunctional for the spaces where we spend most of our time. From glass that switches from transparent to opaque for privacy or blackout shading in architecture, the automotive industry, display glass for a new era in digital signage and communication.

SGLASS

Smart Glass is a smart decision!

As your new and important partner in the entire SGLASS product range, we would like to introduce ourselves and tell you more about SGLASS, our company's strategy, our product line and above all the many benefits you can get.

Company: GPM Group d.o.o.

----- Provide -----

Brand: SGLASS 

----- HAVE -----

Products: smart Film | smart Glass | car smart film |



Off



On

01

Smart Film series

Classic self-adhesive smart film | Classic laminated smart film | various transparency and high temperature series | self-adhesive ultra-transparent hard coating smart film | gray smart film | automatic smart film | PNLC smart film | Custom designed smart film | Blind smart film

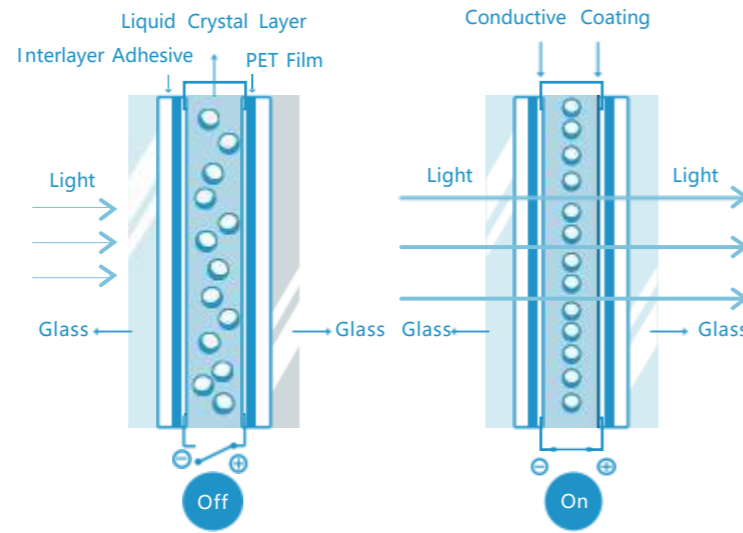
widely used in offices, hotels, banks, hospitals, shops, clubs, villas and other places..

About smart Film

Smart film is a new type of electronic light control product. The electronically controlled smart film is made of a liquid crystal/polymer hybrid material injected into the middle of two transparent conductive films.

PDLC film in the absence of an electric field is an electronically controlled smart film in an opaque state.

When an alternating current is applied, the liquid crystal molecules are arranged in an orderly fashion, changing the electrically controlled dimming film from opaque to transparent - on/off state.



PDLC



Privacy protection

You can set it transparent or opaque at any time to protect your privacy and security. Make your space more flexible, choose open or private as you like.



Touch screen and projection

Excellent visual effects will be achieved when watching movies through a high-definition projector that allows multiple touch of the film.



Security

Even if the glass is broken, the shards can still be adsorbed on the smart film, so you can avoid personal injury from the broken glass.



Environmental protection

The installation of smart film can effectively reduce the loss of decoration, which can better reduce pollution and protect the environment.



Space partition

You can set it transparent or opaque at any time to protect your privacy and security. Make your space more flexible, choose open or private as you like.



Cooling and UV protection

By blocking more than 98% of infrared rays, the effect of thermal insulation is achieved. At the same time, it blocks more than 99% of ultraviolet rays, protects indoor furniture from fading and aging, and prevents ultraviolet rays from harming the body.



Anti-noise

Compared to normal glass, the anti-noise ability of the glass with the Sglass smart film is increased by 20%.



Various control methods

To meet your different needs, you can choose the control method you want: remote control, wired control, infrared induction, voice control, mobile app, etc. In addition, you can choose an FM transformer to gradually change the film.



Product size

Classic self-adhesive smart film

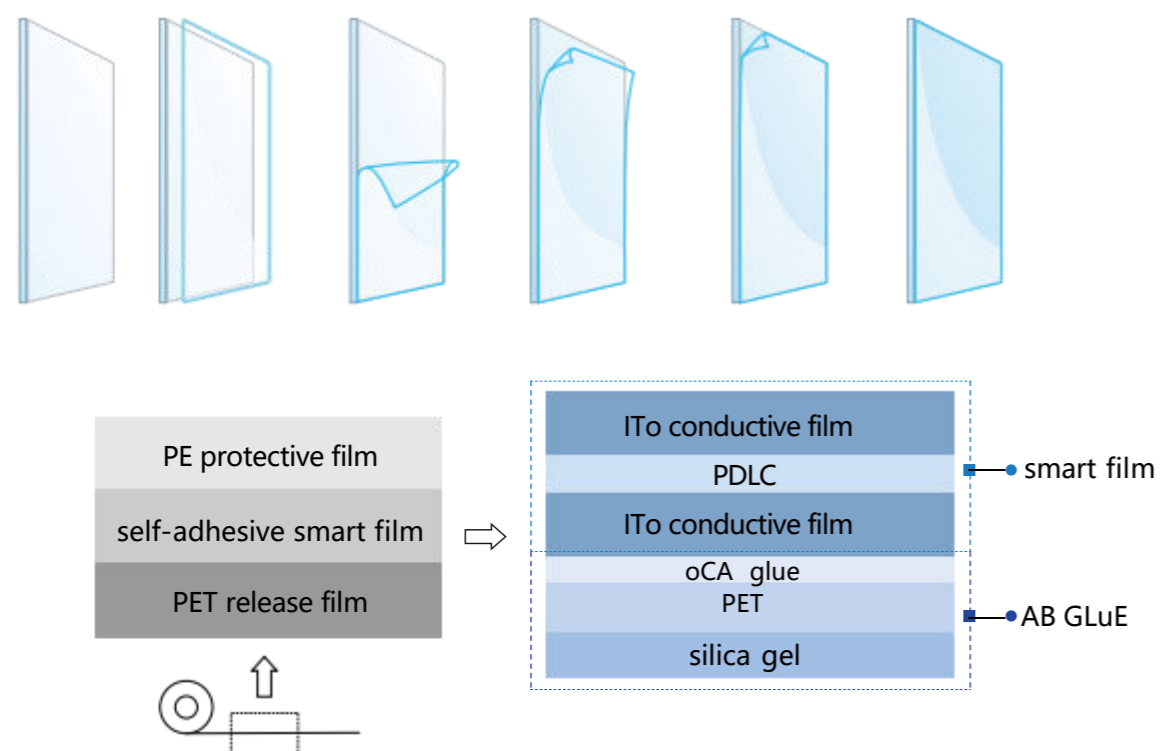
Items		
Thickness	Total thickness &without protective film(	0.47mm
	PDLC	0.38mm
	AB glue	90um
	PE protective film	35um
sheet	PET release film	50um
	width	1000,1200,1500,1800&mm(
	Length	According to customer requirements
Roll	width	1020,1220,1520,1850&mm(
	Length	2 50m/Roll
Roll tube	Inner Diameter	6 inches

Note): This width is the actual size, the width of the calculated area is 1000,1200,1500,1800 mm

Classic self-adhesive smart Film

self-adhesive liquid crystal smart film - called self-adhesive smart film (it is covered with glue and AB glue (on one side of the smart film, which is used to attach the target glass).

Note: The self-adhesive PDLC film must not come into contact with water, otherwise it will stop working.



(Color and thickness do not represent the actual situation, only for the convenience of illustration)

Photoelectric Performance

Classic self-adhesive smart film

Items	On/Off	Test Methods/standards
operating voltage	On 60V	Multimeter/ Voltage Regulator,wGw
Power consumption	On s 5w/m2	Multi-parameter electric measuring instrument
Viewing angle	On 2 160.	Visual Inspection
UV blocking rate	Off 2 99%	optical transmittance tester
Infrared blocking rate	Off 1 60%	
Response time	Off→On s 30ms	Liquid crystal parameter integrated tester
	On→Off s 200ms	
operating temperature	-- -30. C ~ 95. C	constant temperature and humidity testing machine
Lifetime	-- 10 -15 years	GB18910.5-2008
switching times	-- 1 2 million times	self-made on/off tester

smart film is driven by AC power, colorless and transparent when power is added, and fogged and translucent when power is removed, and its photoelectric performance is shown in the table above.

Product Transparency / Haze

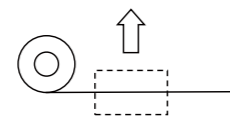
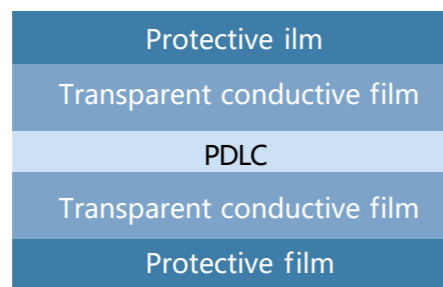
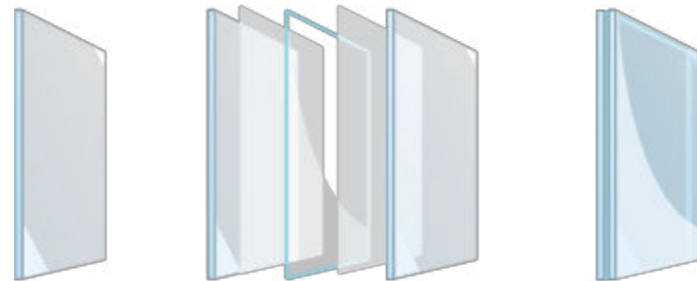
Classic self-adhesive smart film

operating ambient temperature	Transparency	On/Off	Full light tester			Parallel light tester	
			Haze	Full light transmittance	b value	45. light	Parallel light
Low temperature	High transparency	OFF	94.56	81.91	5.93	/	/
		ON	4.53	85.4	3.77	58.16	83.43
	ultra transparency	OFF	94.67	82.45	6.97	/	/
		ON	3.54	87.34	4.69	60.3	85.45
High temperature	High transparency	OFF	94.58	85.51	7.25	/	/
		ON	3.56	90.34	4.8	63.76	87.7
	ultra transparency	OFF	94.62	80.75	6.02	/	/
		ON	4.57	85.32	3.94	59.66	83.4
High temperature	ultra transparency	OFF	94.68	82.27	6.82	/	/
		ON	3.6	87.15	4.59	60.6	85.53
	ultra high transparency	OFF	94.47	85.55	7.35	/	/
		ON	3.76	90.24	4.85	63.65	87.6



Classic Laminated smart Film – Smart Glass

Laminated liquid crystal smart film - called smart film it is non-sticky on both sides and can be tightly bonded to glass through EVA film to make smart laminated glass.



(Color and thickness do not represent the actual situation, only for the convenience of illustration)

Product size

Classic laminated smart film

Items		
Thickness	Total thickness &without protective film(	0.38mm
	Conductive substrate (single layer)	188um
	Protective ilm (single layer)	35um
sheet	width	1000,1200,1400,1500,1800,2000mm
	Length	According to customer requirements
Roll	width	1050,1250,1450,1550,1850,2005)mm
	Length	2 50m/Roll
Roll tube	Inner Diameter	6 inches

Note): This width is the actual size, the width of the calculated area is 1000,1200,1400,1500,1800,2000 mm

Photoelectric Performance

Classic laminated smart film

Items	On/Off		Test Methods/standards
operating voltage	On	60V	Multimeter/ Voltage Regulator,wGw
Power consumption	On	s 5w/m2	Multi-parameter electric measuring instrument
Viewing angle	On	2 160.	Visual Inspection
uv blocking rate	Off	2 99%	optical transmittance tester
Infrared blocking rate	Off	1 60%	
Response time	Off → On	s 30ms	Liquid crystal parameter integrated tester
	On → Off	s 200ms	
operating temperature	--	-30. C ~ 95. C	constant temperature and humidity testing machine
Lifetime	--	10 -15 years	GB18910.5-2008
switching times	--	1 2 million times	self-made On/off tester

smart film is driven by AC power, colorless and transparent when power is added, and fogged and translucent when power is removed, and its photoelectric performance is shown in the table above.

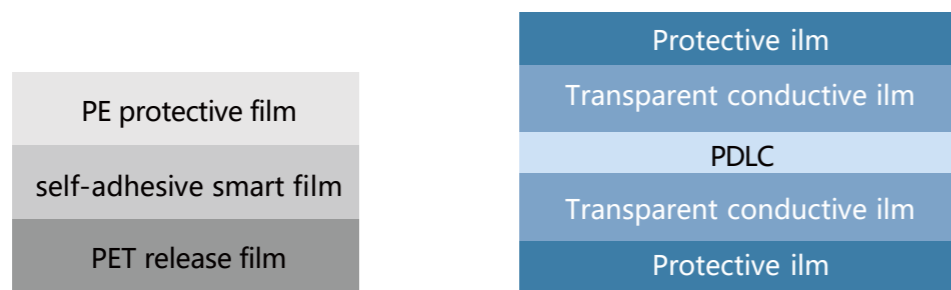
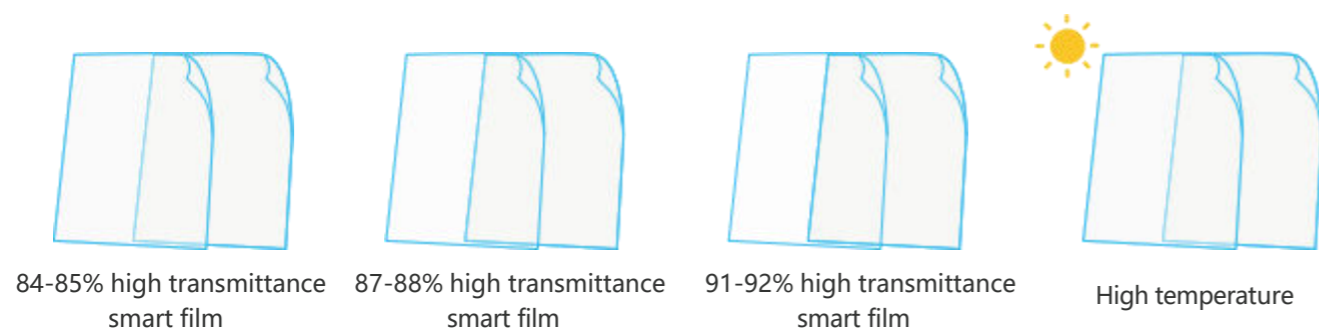
Product Transparency / Haze

Classic laminated smart film

operating ambient temperature	Transparency	On/Off	Full light tester			Parallel light tester	
			Haze	Full light transmittance	b value	45. light	Parallel light
Low temperature	High transparency	OFF	94.51	81.87	5.69		
		ON	3.73	84.68	3.65	57.16	83.3
	ultra transparency	OFF	94.65	84.5	6.79	/	/
		ON	2.55	87.87	4.51	61.65	86.32
	ultra high transparency	OFF	94.57	86.55	7.03	/	/
		ON	2.15	91.37	4.7	64.63	89.23
High temperature	High transparency	OFF	94.62	80.86	5.79	/	/
		ON	3.92	84.3	3.81	58.43	82.6
	ultra transparency	OFF	94.60	84	6.38	/	/
		ON	2.75	87.69	4.53	61.73	86.13
	ultra high transparency	OFF	94.59	86.78	6.87	/	/
		ON	2.24	91.05	4.8	64.72	89.01



Diferent Transparency And High Temperature series



(Color and thickness do not represent the actual situation, only for the convenience of illustration)

Product Parameters

84-85% high transmittance smart film

	self- adhesive	Laminated
Haze(On)	3%±1	3%±1
Haze(Off)	95%±1	95%±1
Total light transmittance(On)	84%-85%	84%-85%
Total light transmittance(Off)	78%-79%	78%-79%
UV block	>99%	>99%
IR block&Off(	>85%	>85%
Power consumption	4w/m2	4w/m2
Voltage	AC60V	AC60V

Product Parameters

87-88% high transmittance smart film

	self- adhesive	Laminated
Haze(On)	3.2%±1	3%±1
Haze(Off)	95%±1	95%±1
Total light transmittance(On)	87%-88%	87%-88%
Total light transmittance(Off)	67%-73%	67%-73%
UV block	>99%	>99%
IR block&Off(	>85%	>85%
Power consumption	4w/m2	4w/m2
Voltage	AC60V	AC60V
operating temperature	-20C~70C	-20C~70C

Product Parameters

91-92% high transmittance smart film

	self- adhesive	Laminated
Haze(On)	3%±1	2%±1
Haze(Off)	95%±1	95%±1
Total light transmittance(On)	91%-92%	91%-92%
Total light transmittance(Off)	69%-75%	69%-75%
UV block	>99%	>99%
IR block&Off(	>85%	>85%
Power consumption	4w/m2	4w/m2
Voltage	AC60V	AC60V
operating temperature	-20C~70C	-20C~70C

Product Parameters

High temperature smart film

	self- adhesive	Laminated
Haze(On)	3.2%±1	3%±1
Haze(Off)	95%±1	95%±1
Total light transmittance(On)	84%-85%	84%-85%
Total light transmittance(Off)	60%-71%	60%-71%
UV block	>99%	>99%
IR block&Off(	>85%	>85%
Power consumption	4w/m2	4w/m2
Voltage	AC60V	AC60V
operating temperature	-20C~105C	-20C~105C



Product Parameters

84-85% high transmittance smart film with hard coat

Haze(On)	3.5%±1
Haze(Off)	95.6%±1
Total light transmittance(On)	84%-85%
Total light transmittance(Off)	78%-79%
UV block	>99%
IR block&Off(	>85%
Power consumption	4w/m2
Voltage	AC60V

Product Parameters

87-88% high transmittance smart film with hard coat

Haze(On)	3.5%±1
Haze(Off)	95.6%±1
Total light transmittance(On)	87%-88%
Total light transmittance(Off)	67%-73%
UV block	>99%
IR block&Off	>85%
Power consumption	4w/m2
Voltage	AC60V
operating temperature	-20C~70C

Product Parameters

91-92% high transmittance smart film with hard coat

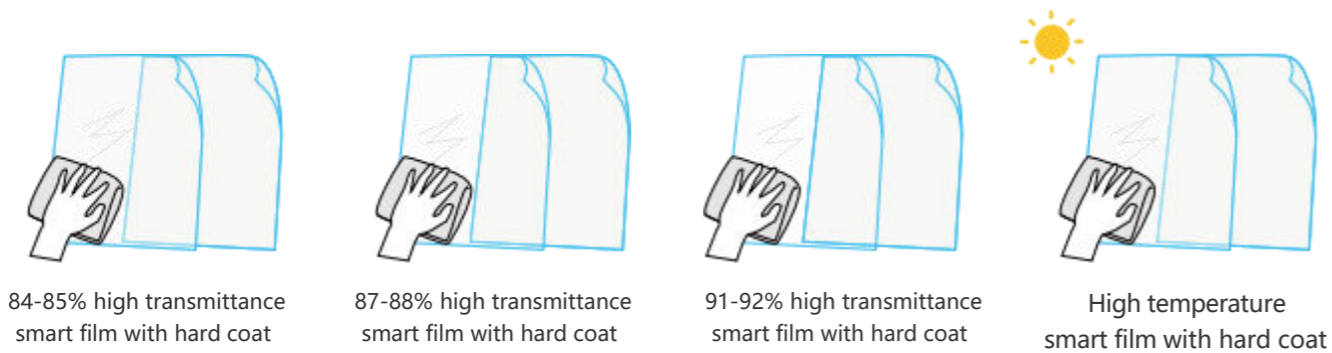
Haze(On)	3.5%±1
Haze(Off)	95.6%±1
Total light transmittance(On)	91%-92%
Total light transmittance(Off)	69%-75%
UV block	>99%
IR block&Off(	>85%
Power consumption	4w/m2
Voltage	AC60V
operating temperature	-20C~70C

Product Parameters

High temperature smart film with hard coat

Haze(On)	3.5%±1
Haze(Off)	95.6%±1
Total light transmittance(On)	84%-85%
Total light transmittance(Off)	60%-71%
UV block	>99%
IR block&Off(	>85%
Power consumption	4w/m2
Voltage	AC60V
operating temperature	-20C~105C

Self Adhesive ultratransparency smart Film with Hard Coat

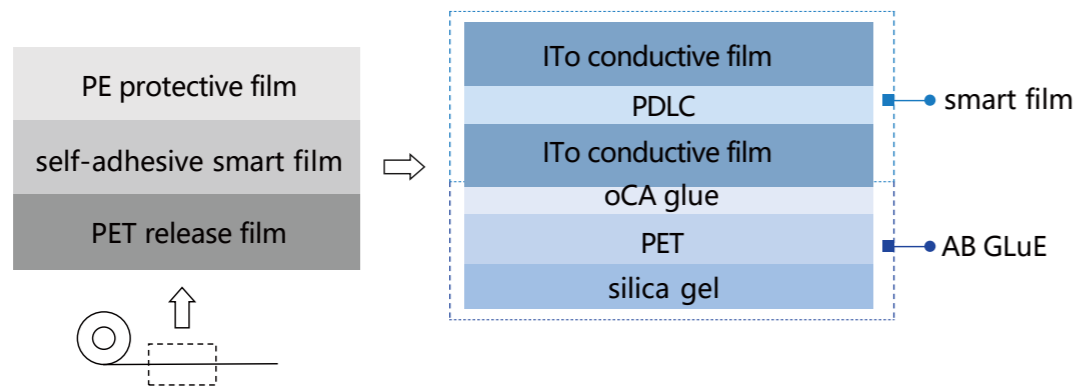


84-85% high transmittance smart film with hard coat

87-88% high transmittance smart film with hard coat

91-92% high transmittance smart film with hard coat

High temperature smart film with hard coat



(Color and thickness do not represent the actual situation, only for the convenience of illustration)



Product size

Gray smart film

Items		
Thickness	Total thickness &without protective film(	0.38mm
	Conductive substrate (single layer)	188um
	Protective ilm (single layer)	35um
sheet	width	1250,1500,1800mm
	Length	According to customer requirements
Roll	width	1250,1550,1800mm
	Length	2 50m/Roll
Roll tube	Inner Diameter	6 inches

Note): This width is the actual size, the width of the calculated area is 1200,1500,1800 mm

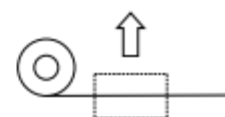
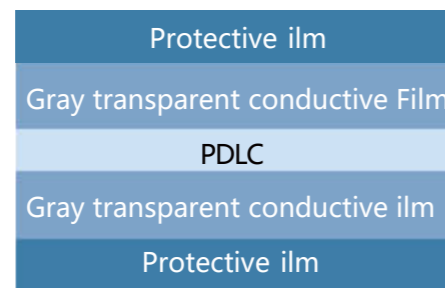
Gray smart Film

Gray liquid crystal smart film - called smart film (it is non-adhesive on both sides. It can be closely combined with glass through EVA film to make gray smart laminated glass; you can also stick it with AB glue on one side to make self-adhesive gray smart film .



Laminated

self-adhesive



(Color and thickness do not represent the actual situation, only for the convenience of illustration)

Photoelectric Performance

Gray smart film

Items	On/Off		Test Methods/standards
operating voltage	On	60V	Multimeter/ Voltage Regulator,wGw
Power consumption	On	s 5w/m2	Multi-parameter electric measuring instrument
Viewing angle	On	2 160.	Visual inspection
UV blocking rate	Off	2 99%	optical transmittance tester
Infrared blocking rate	Off	1 70%	
Response time	Off → On	s 30ms	Liquid crystal parameter integrated tester
	On → Off	s 200ms	
operating temperature	--	-30, C ~ 95, C	constant temperature and humidity testing machine
Lifetime	--	10 -15 years	GB18910.5-2008
switching times	--	12 million times	self-made on/off tester

Gray smart filmis driven by AC power, gray and transparent when power is added, and fogged and translucent when power is removed, and its photoelectric performance is shown in the table above.

Product Transparency / Haze

Gray smart film

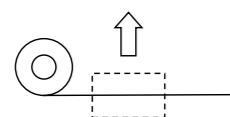
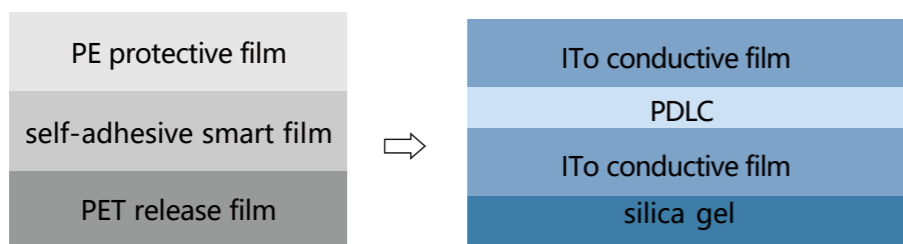
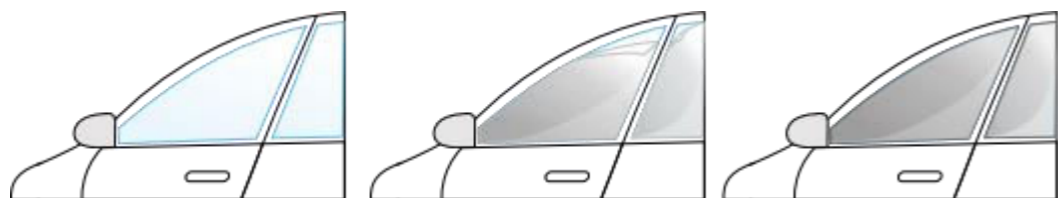
Product	operating ambient temperature	Full light tester			Parallel light tester		
		On/Off	Haze	Full light transmittance	b value	45. light	Parallel light
Gray laminated Smart film	/	OFF	94.38	21.67	-1.06	/	/
		ON	3.02	24.64	-3.45	15.5	24.5
Gray self. adhesive Smart film	/	OFF	94.24	26.35	0.12	/	/
		ON	3.54	29.85	-2.24	19.7	29.33



Auto smart Film

Auto smart film is a smart film product developed by our company on the basis of the first generation of smart film, using special substrates and wide temperature liquid crystal materials, and specially developed for automotive use conditions.

Note: Auto smart Film requires water to assist with application.



(Color and thickness do not represent the actual situation, only for the convenience of illustration)

Product size

Auto smart film

Items		
Thickness	Total thickness &without protective film(	0.13mm
	PDLC	0.12mm
	silica gel	0.01mm
	PE protective film	130um
	PET release film	50um
sheet	width	1200,1500)mm
	Length	According to customer requirements
Roll	width	1250,15002)mm
	Length	2 50m/Roll
Roll tube	Inner Diameter	6 inches

Note) : This width is the actual size, the width of the calculated area is 1200,1500, mm

Photoelectric Performance

Auto smart film

Items	On/Off		Test Methods/standards
operating voltage	On	48V	Multimeter/ Voltage Regulator,wGw
Power consumption	On	s 5w/m2	Multi-parameter electric measuring instrument
Viewing angle	On	2 160.	Visual Inspection
UV blocking rate	Off	2 99%	optical transmittance tester
Infrared blocking rate	Off	1 82%	
Response time	Off → On	s 30ms	Liquid crystal parameter integrated tester
	On → Off	s 200ms	
operating temperature	--	-30. C ~ 95. C	constant temperature and humidity testing machine
Lifetime	--	10 -15 years	GB18910.5-2008
switching times	--	12 million times	self-made On/Off tester

Auto smart film is driven by AC power, gray and transparent when power is added, and fogged and translucent when power is removed, and its photoelectric performance is shown in the table above.

Product Transparency / Haze

Auto smart film

operating ambient temperature	Transparency	On/Off	Full light tester			Parallel light tester	
			Haze	Full light transmittance	b value	45. light	Parallel light
/	/	OFF	94.2	51.19	5.24	/	/
		ON	2.94	56.43	3.2	38.4	55.26

Customized service

At present, SGLASS has three different styles of color smart film, shadow smart film and UV printing smart film with customized design, which can meet the needs of different groups of people in different situations.

| Color PDLC Film

In order to meet the demand of different people, we print color PDLC film. Available in black, grey, green, orange, red, blue for the ability to decorate wherever you want while increasing privacy.

| Blind PDLC Film

Professionals with new shading solutions that have never been possible before, allowing us to embed liquid crystal films in various shapes into thin glass windows and create window shades that can be controlled to achieve different levels of transparency, opening animations and support for unconventional window shapes.

| Custom-design PDLC Film

SGLASS SMART FILM UV Printing Film uses UV printing technology to print arbitrary patterns. Compared with ordinary smart film, it brings a unique visual experience that ensures privacy and decorativeness.