



Product catalog

PDLC

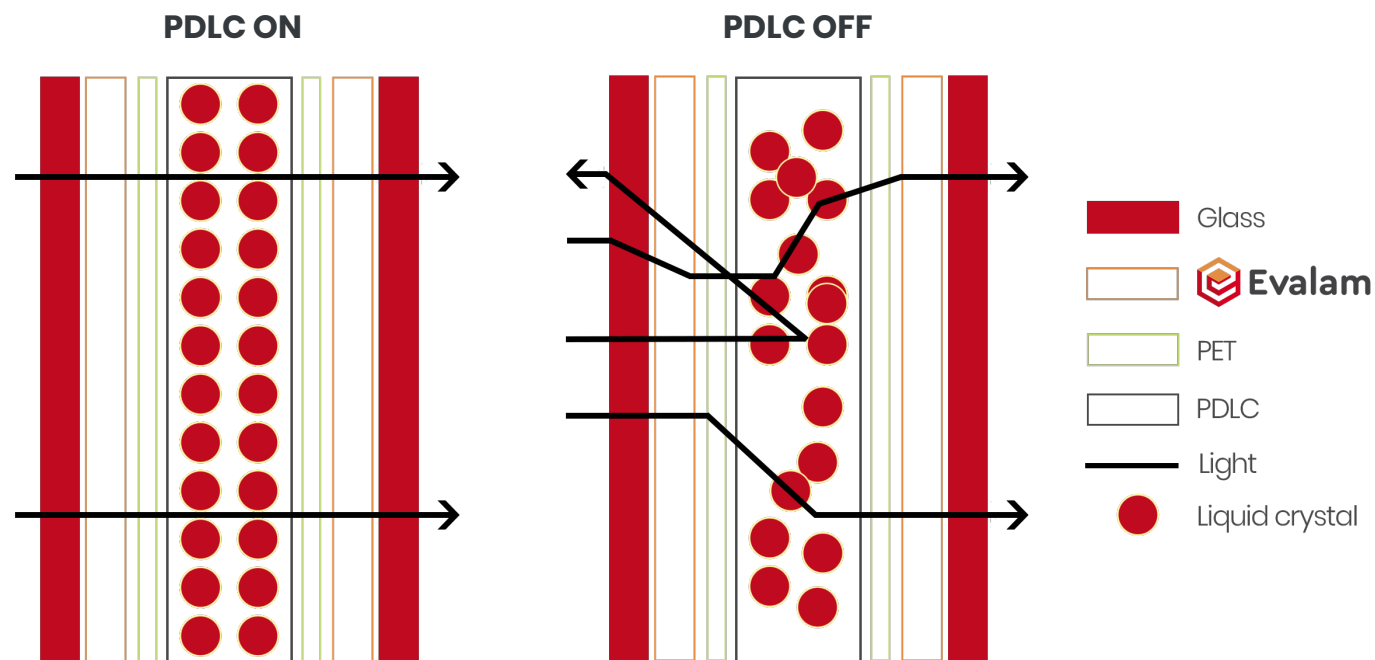


What is the PDLC?

PDLC (Polymer Dispersed Liquid Crystal) is a material that allows turning spaces with transparent glasses into totally private areas. Just by applying an electrical current, the molecules inside the liquid crystal align so that light can travel through it. Then, when the current is interrupted, the molecules distribute randomly inside the glass to provide instant privacy.

This technology can be fully integrated in automated systems, as well as be controlled by means of a remote, smartphone or tablet.

Laminated PDLC is suitable for a wide range of applications, both architectural and decorative.





Quality

i-ON by Pujol is a company included in Pujol Group. The great experience applied to the quality standards at other companies of the group is also applied in the manufacture of PDLC, which is developed in our own laboratory following high and rigorous processes on the production process, as a result, we offer a high-performance product and unique characteristics in the market.

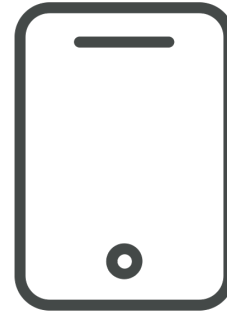


PDLC control



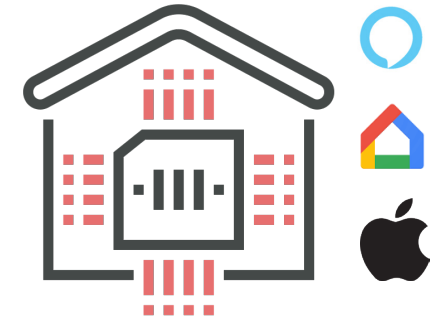
Remote control

Our remote control allows users to turn the glass opaque or transparent depending on their needs just by pressing the ON and OFF buttons.



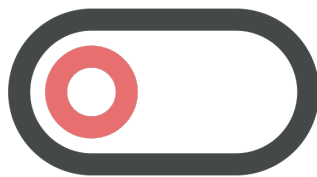
Phone or tablet

It is very easy to change the PLC from opaque to transparent or vice versa from any smartphone or tablet. You only need to install and configure one app.



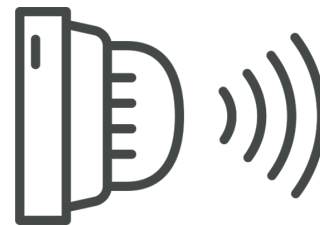
Home automation

The i-ON by Pujol PDLC, can be integrated with any home automation technology, including assistants like Alexa, Siri, Google Home, etc.



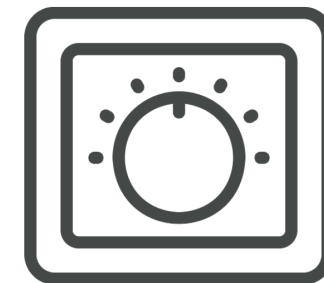
Switch

A wall switch also allows the PDLC to be switched on or off, just like any other light in the room.



Sensor

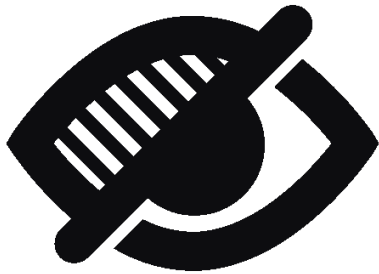
Our laminated PDLC glasses, can be programmed in combination with a movement or sound sensor. This functionality reduces energy consumption and facilitates the use of the product.



Dimmer

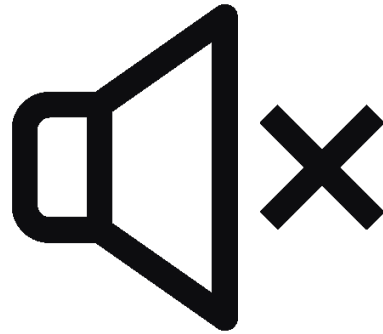
The user can choose the level of privacy he wants using a dimmer. PDLC laminated glass will adapt.

PDLC benefits



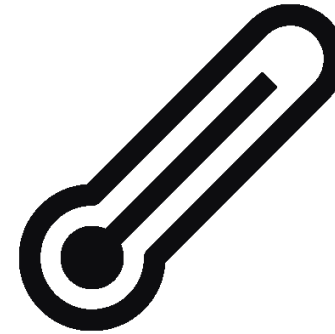
1. Privacy

While in resting mode, PDLC is a material that turns the glass opaque to grant privacy. When the glass is activated with electricity, an excellent level of transparency can be enjoyed.



2. Acoustic insulation

The great sound insulation obtained by combination with Evalam lamination turns the PDLC laminated glass from i-ON by Pujol into the most appropriate solution for hotels, housing and offices.



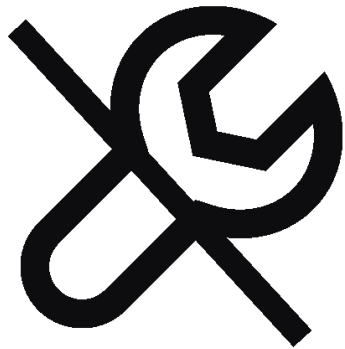
3. Thermal insulation

Glass laminated with film by i-ON by Pujol improves thermal comfort and grants an adequate environment regardless of the season of the year.



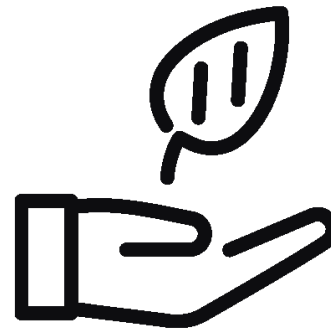
4. Exterior use

Laminated PDLC from i-ON by Pujol complies with every applicable regulation according to ECC law on glazing construction in exterior and interior spaces.



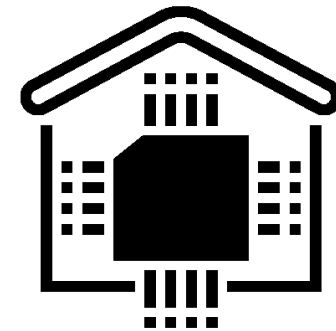
5. Without maintenance

It needs exactly the same care that a standard glass requires.



6. ECO-friendly

Its low power consumption turns PDLC from i-ON by Pujol into a sustainable product with a low environmental impact.



7. Home automation

The glass can be fully integrated into automated systems and connected to movement sensors, phones, tablets, etc. This makes for an easy adaptation to the necessities and lifestyle of each user.

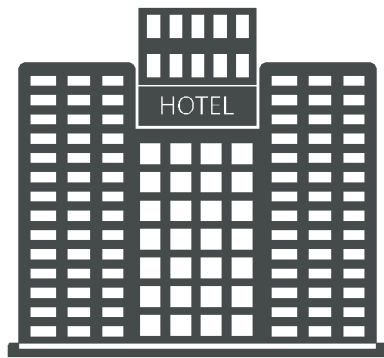
Applications



1. Stores

PDLC's versatility makes it a product suitable to be installed in stores. Window displays turn into advertising campaigns running 24 hours a day, 7 days a week, 365 days a year.





2. Hospitality

Hotels, hospitality and wellness spaces make use of the benefits of PDLC to separate different environments without giving up on natural light and providing their clients with a plus of exclusiveness. They also provide privacy in places where confidentiality and peacefulness are supposed to be at the core, such as private rooms, VIP areas, saunas, pools or massage rooms.



Applications



3. Health services

The use of PDLC makes curtains, blinds and roller blinds unnecessary, and thus, hygiene inside the rooms improves significantly. All the alternatives are sources of infection because their surfaces can accumulate virus and bacteria in great quantities. Glass is much easier to clean and thus, prevents the possibility of infections. This is the ideal option for intensive care units, newborn rooms, operating rooms or emergency areas.





4. Offices

Our PDLC can be laminated to make separating glass walls, separate offices or meeting rooms, providing full privacy to the people inside. It also offers a modern look, both sober and fashionable, to the projects there developed.



Applications



5. Education

Using PDLC on windows and walls improves the learning environment. It provides the student with cozy and open spaces where they can develop all their abilities. Also, a very luminous classroom can be turned into a projection room to perform educational activities.





6. Housing

It offers privacy and eliminates the need to install blinds or curtains on windows. It can also be applied to shower screens or glass walls.

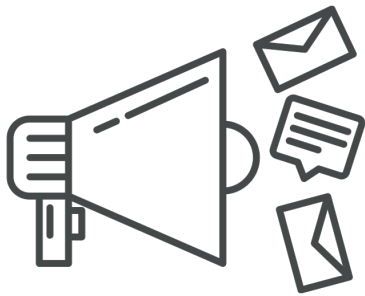


7. Bathroom

PDLC applied to bathroom glass walls provides instant privacy and makes the spaces look wider when in transparent mode. This material shows a high resistance to humidity and prevents delamination, so it is a perfect product for this kind of project.



Applications



8. Advertising

It makes it possible to design dynamic window displays on which advertisements can be projected. Also, due to its high resistance, it can be used to make temporary architecture or projects on the street.




PDLC properties

Thickness	mm	0.4 +/- 5%
Width	mm	1.800 / 1.500 / 1.200 / 1.000
Length	m	50
ON / OFF times	ON/OFF	>100.000
Adhesion force	N/cm ²	50 g/mm
Voltage - ON	V	48
Saturated voltage - ON	V	< 25
Response time - OFF / ON	ms	< 200
Response time - ON / OFF	ms	< 10
Energy consumption	W/m ²	3

Laminated PDLC properties

Visible light transmittance - ON	%	> 78
Visible light transmittance - OFF	%	> 68
Parallel light transmittance - ON	%	> 76
Parallel light transmittance - OFF	%	< 1,5
Haze - ON	%	< 4,2
Haze - OFF	%	90,27
Vision angle		> 175



“Our ambition is to get the best solution for each need, there is no limit in glass creation”

Jorge Pujol
CEO Pujol Group



Carrer de la Indústria, 10
Sant Feliu de Llobregat
08980, Barcelona, Spain
+34 665 661 544

i-ON by Pujol is a  Pujol Group company.

V0- June-2022

i-ON by Pujol reserves the right to modify this catalog without prior notice, depending on availability and range updates. Subject to technical modifications. The user of our products is responsible for ensuring that the product is suitable for the intended use and conforms to all relevant regulations.