



Safety device to measure tinted glass

Have peace of mind on the road with the right tinted glass percentage



Universidad Tecnológica de Pereira

Target Markets / Potential Applications

- Automobile industry
- Optical transitions glasses
- Aeronautical industry

IP Status

Patent: [NC2018/0004741](#)

Offer: Worldwide exclusive license to all application of the technology.

An instrument for accurate measurement of tinted glass to provide safety to passengers.

Innovators at the *Universidad Tecnológica de Pereira* have developed a technology to measure the step of the amount of light through a tinted glass.

The technology is aimed at a device for measuring light transmission through a translucent medium selected from a polymer, resin, crystal, glass and /or mixtures of these. Actually, the available instruments only work in "controlled environments," so the research was done to have a tool that does this in a "real environment".

Benefits



Feeling of security



Portable and small size



Accuracy



Efficient visibility



The need

Vehicle owners install films on the windows to lower light reflection. These films are characterized by being opaque and therefore diminish visibility. The law requires films that allow the transmission of at least 60% of the light in the front side windows and windshields, while for the rear side windows, the light transmission must be at least 55% (**VLT – Visible Light transmission**).

Currently, the market does not have a designed system to determine the amount of light that is transmitted through a vehicle glass fitted with this type of film.

There is a need, for passengers and traffic authorities, to have an instrument that guarantees an accurate measure. **In the case of frequent drivers to ensure that they can hide their identity, but at the same time have excellent external visibility to reduce risk accidents in the road.** In the case of the authorities, when there is a need to impose fines, they will not be sued for inaccurate measures.

The solution

Element connected to a control system comprising a processor that controls the emitting factor and interprets the information transmitted by the sensor element, thus determining the **amount of light** that has been conveyed by the medium.

For this reason, **this device accurately detects the tint percentage providing authorities and drivers with accurate readings.**



Fig. 1



Fig. 2

Fig. 1 First demo made of wooden cover to test the amount of light and measuring a tinted glass percentage.

Fig. 2 A portable device render for agent transportation application.

Innovators

Main innovator



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Innovation Maturity

TRL3 - Proof of concept stage
(applied research):

- A demo to probe the amount of light concept measuring a tinted glass percentage.

CRL1 - First business model
hypotheses identified stage:

- Transit authorities segment client archetype was described.

What are the TRL & CRL?

Other relevant information

Videos Sell Sheets

Demos evolution from one to four:

<https://bit.ly/2YyJyfB>