

Maximum energy savings all year round for green school

The situation:

Cape Town-based Lunar Products, supplier of LLumar Window Film, was approached by DTM/Spoormaker Consulting Engineering to provide a window film to maintain maximum energy savings all year round.

Their client, Gina Mattei, the principal of the Old Mutual Green'scool Early Learning Centre in Pinelands, Cape Town, a large crèche (280 children in a 2 200m² building) for the insurance giant, pointed out that they were experiencing extremely high heat gain through their windows (temperatures of up to 30° were recorded) and were also losing a lot of heat in winter from especially their under floor heating in the nursery section.

An up-market air conditioner was installed, however, with the amount of glass in the building, the "competition" between the cool air and the heat penetrating the building would have rendered the air conditioner almost useless, or would have sent the school's electricity bill sky high.

The engineering company was looking for a film that will provide a U-value (the measure of how well a building component transmits heat, a lower U-value indicating that more heat is kept inside the building) of approximately 4.0 – 4.5 W/(m²K) (to fit into their energy models) and still allow maximum visible light transmittance (VLT).

Another requirement was a budget limit of R500 per square meter.

Winner

Pierre Rossouw of Lunar Products in Cape Town is the first winner of LLumar Window Film to the value of R1 500 for submitting a case study to be published in NewsLLetter. E-mail your case study to richard@llumar.co.za to have it considered for publication in future issues of NewsLLetter, or on www.llumar.com.

Case Study



The solution:

Lunar Products recommended LLumar LE 50, which will provide a 30% increase in insulation of internal heat during winter and a solar energy reduction of 58% during summer time.

The increased insulation benefit in LLumar's low emissivity LE films is achieved by its low emissivity coating which reflects a large proportion (64%) of radiant energy back into the room, significantly reducing the radiant energy lost through the glazing. This is achieved while providing an optical clear view from the inside of the building. The LE 50 looks extremely natural from the inside of a building and it is actually very difficult to notice that there is any film on the windows after installation, which is what the client particularly wanted.

The results:

The LLumar LE 50, LE film provided a U-value of 4.4 W/(m²K) (insulating the internal heat) and a total solar energy rejected (TSER) percentage of 58%, reflecting a huge amount of the solar heat gain on hot and sunny days. With a VLT of 49% it also retains a lot of natural light as requested by the client.

Based on the information from the energy model completed by DTM, the installation is expected to yield sufficient energy savings (especially with the installation of a new AC system and with massive electricity rate increases in South Africa) to pay for itself in approximately 3-5 years.

Gina Mattei, principal of the Green'scool, says:

"The LLumar Window Film placed on most of the windows and doors cut the penetrating heat by more than 70%. Not only does the film cast a shadow down our passages, which gives the building a warmer, more comforting look from that of the glaring sun reflecting off our floors, but it also assists in keeping the building naturally cooler, therefore, reducing the strain on our air conditioner".



Nissan SA says yes to LLumar

Nissan South Africa (NSA) has approved LLumar as a supplier for smash-and-grab window film protection.

Fernando da Silva, senior manager: aftersales marketing of NSA, considers it a great opportunity for dealers to increase accessory sales.

According to the Fin24 website, NSA controls 8% of the South African vehicle market and aims to produce 44 000 units in 2010, increasing the volume to 50 000 next year.

It quotes NSA director of marketing, Neil Craddock saying that Nissan hopes to capture about 5% more market share over the next two years.

NSA is the latest local manufacturer after Toyota SA, Hyundai SA, Renault SA and Suzuki SA, together with dealer groups, including Combined Motor Holdings (CMH) and Unitrans Automotive, to approve LLumar as supplier for window film.



Technical tip

LLumar Film-to-Glass Recommendation Chart

Solar Absorption and Thermal Stress – Building Film Applications

Solar control films are very good at reducing heat discomfort in buildings by lowering the solar energy passing through windows. They work by either reflecting sunlight back outside or absorbing it in the film. Any solar energy absorbed in the film is converted to heat and is transferred to the glass. As the glass warms, it expands in size. If the glass pane expansion is uneven or restricted, stress builds up and, in extreme cases, the glass can crack. It is for this reason there are restrictions on some film and window combinations. As an aid to proper installations, Solutia Performance Films has provided a chart of film-to-glass guidelines.

NOTE: We strongly recommend that you download and use EITHER the **interactive version of the chart** OR the **new web application for Smartphones and PCs**, as they instantly perform all the calculations (described below) for you. All you need do is select from the various drop-down lists the glass types and the other conditions factors. A full list of permissible films you may install is displayed after you select from the drop-down lists. Microsoft Excel is required for the spreadsheet version; only a web browser on your PC or Smartphone with web access is needed for the Web version.

- From the LLumar Technical Website

Should you require access to, or training on the film-to-glass chart, contact Chantelle Dean on chantelle@lumar.co.za, (011) 321 8040

LLumar backs road safety campaign

LLumar Films is strongly involved in the initiative of the PG Glass group to promote road safety during the summer holidays.

Promotions in co-operation with the regional radio stations Kaya FM, OFM, Jacaranda 94.2 FM, Algoa FM, Good Hope FM, East Coast Radio and Highveld Stereo were done in Soweto, Bloemfontein, Menlyn, Port Elizabeth, Goodwood, Sandton, Bruma, Blackheath, Boksburg, Edenvale and Pinetown.

A major promotion is taking place at Bloemfontein Ultra City on Friday 10 December 2010, the day the schools are closing and peak traffic to holiday destinations is expected to pass the Free State capital.

TV programs Morning Live and Espresso will also be utilized to convey the message.

Information on the safety benefits of LLumar Film can also be found on the Arrive Alive group of websites and blogs.

A TV insert on the protection afforded by LLumar Film during side-impact collisions will be flighted on DSTV during December.

LLumar Film was also part of the vehicle and driver safety week at Eskom's MegaWatt Park headquarters. Energy-efficient film was promoted there as well.

Print media

The magazines *Architect & Specificator* and *Specifiser* published features on LLumar EnerLogic Window Film, and valuable feedback was received. The best letter in *Car's* November issue received a prize from LLumar, as did the best reader adventure in the December issue of *Leisure Wheels*.

Internet

A number of brochures on architectural film were uploaded in PDF format to the library of the Specifile website, a site designed specifically for architectural, engineering and construction professionals.

It can be accessed by visiting www.specifile.co.za. Then click on "Brochure Library" and type "LLumar" or "window film" in the search window.

LLumar Film also maintains a banner advertisement on the site, which clicks through to the LLumar website.

Authorised fitment centres are also to receive the Specifile e-newsletter. Should they wish not to receive it, they will be able to opt out with an unsubscribe function.