



GENERAL REQUIREMENTS FOR INSTALLATION OF LLUMAR[®] AND VISTA[®] WINDOW FILMS – MAINTAINING GOOD QUALITY INSTALLATION

This document briefly summarises some important aspects for installation of LLumar[®] and Vista[®] window films.

- **Always ensure that working conditions are safe**, including for you, your staff and your customer's staff. Examples:
 - Do not leave waste on the floor where someone could slip over on it.
 - Ensure the cutting machine is placed in a safe position so that people do not accidentally walk into it.
- Installation personnel must be well trained and have the attitude that safety and quality are of the greatest importance.
- Keep all equipment safe, clean and in good working condition. Examples:
 - Damaged and worn squeegees will not remove water adequately from between the film and the glass.
 - Rusty blades can scratch glass.
- Never put installation tools on the floor or in other unsafe and/or dirty areas.
- Installation should not be attempted when the glass temperature can be cold enough to freeze the water used for installation. As a guide, do not install film when the glass temperature can drop below 5 °C at the time of installation or soon after. Take particular care for external installations because night-time temperatures can be much colder than day-time.
- **Always ensure that the working environment is as clean as possible** – LLumar window film installation must not be carried out when site conditions are dirty, dusty, etc. It is essential that the customer knows the requirements for acceptable site working conditions in advance of the installation work and ensures that these requirements are met. Examples of mistakes to avoid:
 - Open doors and/or windows.
 - Other trades working nearby (e.g. sawing wood, laying carpets).
- Other requirements for high quality installation include:
 - The glass surface must be thoroughly cleaned, especially the areas close to the frame, gaskets or glass edges; incorrect cleaning can prevent correct bond strength
 - Squeegeeing must be thorough; incorrect squeegeeing can prevent correct bond strength and cause defects to appear
 - In general, distilled water should be used in preparing cleaning and installation solutions
- The Installation Guidelines give details of LLumar[®] and Vista[®] Window Film application to glass. These guidelines should be closely followed to obtain high quality installations.
- **Important Safety Notes:** Water, cleaning and installation solutions must not be allowed to affect electrical outlets, electrical equipment, computers, etc.; at the very least, these must be suitably protected, for example, covering electrical sockets so that water cannot enter or affect the socket, by moving equipment from any areas at risk during cleaning / installation, or by switching equipment off and covering them with suitable protective materials. Always use absorbent protective coverings to protect surfaces and equipment from water spray, drips, and runs when cleaning windows and installing films. Check all glass surfaces for susceptibility to scratching before cleaning. Tempered glass and metallised / sputtered / low-e coatings may be damaged / scratched by defective, rusty and damaged blades, by the wrong type of blades, by applying excessive force during cleaning, or by inappropriate use of blade scraping. If in doubt, do not install film and obtain specialist advice; if scratching is possible, use non-scratching equipment / fabrics / pads for window cleaning and preparation.