

# Window Film Fact Sheet

*An independent review of a Solar Control Window Film Energy Study concluded that "applying window film to medium and large buildings should result in a significant reduction of energy consumption and peak demand with substantial economic savings for many film and glass combinations".*

*ITEM Systems*

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**"Energy costs represent 30% of a typical building's annual budget and is the single largest operating cost."**

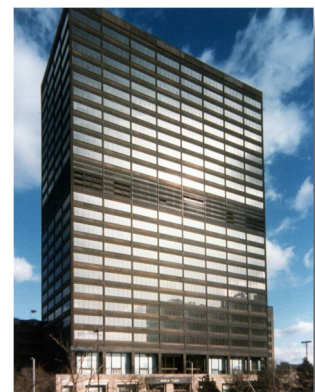
BOMA-Kingsley Quarterly/US EPA Energy Star

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- > Window film controls overall operating costs.
- > Balances building temperatures for improved occupant comfort.
- > Reduces load on HVAC system which prolongs HVAC life.
- > Improves daylighting promoting healthier and more desirable work environment.
- > Provides ultraviolet protection resulting in reduced aging and replacement of building furnishings.
- > Reduces glare and resulting eye strain.
- > Improves building "curb appeal."



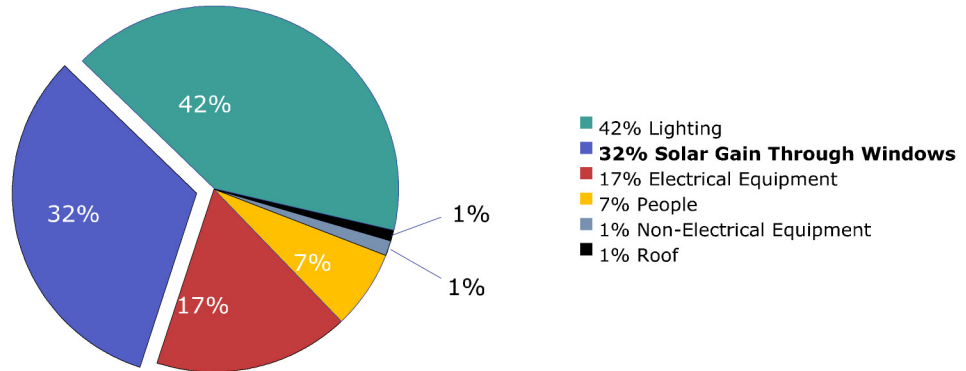
Before



After

# Solar Heat Gain Through Windows Contributes to One-Third of a Building's Cooling Load

2006 DOE Building EnergyDatabook/ Pages 1-12 / Table 1.3.9



"44% of tenants surveyed ranked a sustainable green building operation as 'important' or 'very important'"

Kingsley Associates Survey of Tenant Satisfaction

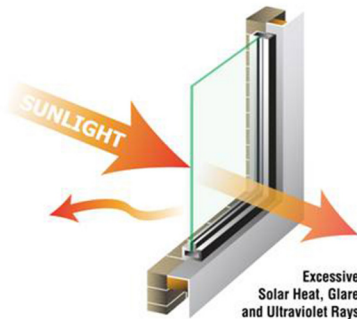
## 75% of Non-residential Window Stock is Energy Inefficient

2006 DOE Building EnergyDatabook

### Window Film Improves Window Performance

- ✓ Reduces solar heat gain by as much as 85%.
- ✓ Improves insulating properties by up to 30%.
- ✓ Average payback of under 3 years.

Before LLumar® Window Film



After LLumar® Window Film



Film rejects solar energy while letting in sunlight

## A Smart Alternative to Window Replacement

- **Superior Return on Investment.** Window film delivers almost 7x greater energy savings per \$1 of investment than high-performance Low-e replacement windows\*
- **Fraction of the cost.** Less than 10% of window replacement cost.
- **Less disruptive installation.** Most windows can be filmed in less than 15 minutes with minimal or no disruption to building occupants (can be done after hours).
- **Certified by the NFRC (National Fenestration Rating Council).** Independently verified fenestration performance for the glazing industry. Confirms that film has comparable solar control performance (Solar Heat Gain Coefficient - SHGC) to glass.
- **Environmentally conscious.** Replaced windows end up in land-fills while window film optimizes existing windows.

Energy Audit  
Tools are  
available using  
Department  
of Energy  
DOE-2 simulation  
modeling  
software



*Window film installs in just 15 minutes per window.*



*New windows are costly and disruptive.*

*\*Study conducted by Certified Energy Manager using eQuest DOE2.2 software. Study methodology and results available upon request.*