



Manage energy costs
& improve

occupant **comfort**



3M™ Solar Films

3M is a leading manufacturer in solar window films. 3M's extensive range includes Prestige, Night Vision, and Low-Energy Films which, can help you **reduce your energy bill**.

3M Solar Films can be applied to windows in offices, schools, hospitals and government buildings to help overcome the problems associated with solar heat gain.

Energy costs typically represent 30% of a building's annual budget. Rising energy bills and the introduction of carbon reduction targets, have focused building owners on finding ways to reduce their energy bills. Within commercial and public buildings, these energy costs are often driven by HVAC costs, as it costs 3 to 4 times more to cool a building by 1 degree Celsius than to heat it.

3M Sun Control Films can **reduce solar heat gain** and help to create a balanced environment in buildings, especially in the summer months, when the films can help to reduce the workload of cooling systems and **save energy costs**.

If a building does not have air conditioning, solar films can help with heat gain management to reduce the temperature inside buildings, improving occupant comfort. 3M Sun Control Films are **highly transparent** and have a **high light transmission**, maintaining the natural light within the building.

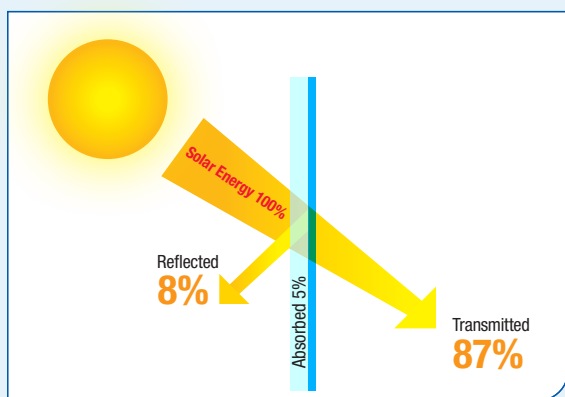


Free Glazing Assessment Free Energy Reduction Assessment

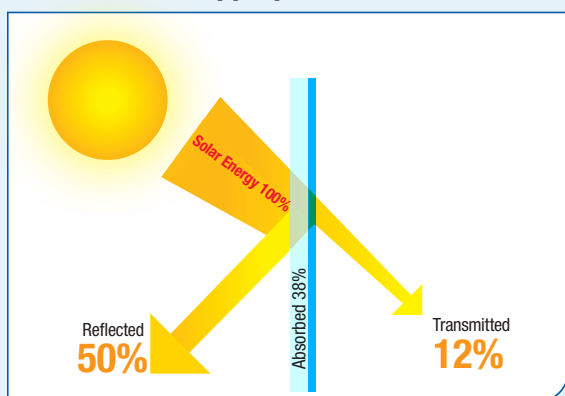
See how applying window film to your building can help to enhance safety and security, increase energy reduction and occupant comfort. Contact us at:

Tel: 0845 600 9543
Email: RenewableUK@mmm.com
3M.co.uk/windowfilm

Unprotected glass



Glass with appropriate window film



Reduce the heat inside your building



Reduce the need for air conditioning
(prolong HVAC life)



Reduce your energy bill



Improve occupant comfort



Improve productivity



Increase profit



Reduce buildings CO2 footprint

3M™ Prestige Series Window Films

3M Prestige Sun Control Films are 3M's premium solar window film product. Its technical advantage stems from its multi-layer and metal-free film construction based on nanotechnology. It has a unique high visual light transmission, whilst offering **high heat reduction** capabilities.

With Prestige Window Films, you can enjoy the benefits of a world-class window film while leaving the beauty of your windows virtually unchanged, and their reflectivity is lower than glass.

- Clear, non reflective appearance maintains the original look of the building
- Reduce solar heat gain
- Reduce air conditioning costs
- High transparency and light transmission
- Non-corrosive
- 15 year warranty on internal film



3M™ Night Vision Series

3M Night Vision Films have low internal reflectance that enhances viewing, especially at night. Higher external reflectance provides **privacy** against prying eyes looking in (light condition dependent).

- Low interior and exterior reflectivity, especially at night
- Reduce solar heat gain
- Reduce air conditioning costs



3M™ Amber 35 Low Energy

This solar and **insulating film** combines sun protection in summer, by reducing solar heat gain, and provides insulation in winter, by reducing heat loss.

Offering superior performance and high light transmission, Low-Energy Films can make a substantial contribution to energy cost management.

- Retain heat in cooler months
- Reduce solar heat gain
- Reduce **heating cost**
- Reduce air conditioning costs
- High transparency and light transmission



High transparency &
light transmission

It costs 3 to 4 times more to COOL a building
by 1°C than to HEAT a building.



Film Properties

Glass type	Film Type	Shading Coefficient	Visible Reflection Exterior	Visible Reflection Interior	Visible Light Transmission	U-value	G-value	TSER	Heat Gain Reduction
Single Pane									
Clear	Amber 35	0.29	54%	60%	30%	0.85	0.25	75%	
Clear	Neutral 35	0.51	20%	18%	36%	0.99	0.44	56%	
Clear	Nickel 50	0.5	24%	23%	50%	0.92	0.44	56%	
Clear	Night Vision 25	0.46	20%	7%	24%	1	0.4	60%	60%
Clear	Night Vision 15	0.33	39%	11%	15%	0.98	0.29	71%	64%
Clear	Prestige 70	0.58	9%	7%	69%		0.5	50%	38%
Clear	Silver 20	0.26	58%	58%	17%	0.93	0.23	77%	
Clear	Silver 35	0.41	36%	40%	35%	0.92	0.36	64%	
Clear	Amber LE35	0.28	52%	56%	30%	0.76	0.25	75%	
Single Pane									
Tinted	Amber 35	0.31	22%	60%	17%	0.85	0.27	73%	
Tinted	Neutral 35	0.45	10%	18%	21%	0.99	0.39	61%	
Tinted	Nickel 50	0.44	12%	22%	30%	0.92	0.38	62%	
Tinted	Night Vision 25	0.43	10%	7%	14%	1	0.38	62%	40%
Tinted	Night Vision 15	0.35	17%	11%	9%	0.98	0.31	69%	51%
Tinted	Prestige 70	0.5	6%	9%	42%		0.43	57%	31%
Tinted	Silver 20	0.3	23%	58%	10%	0.93	0.27	73%	
Tinted	Silver 35	0.39	16%	40%	21%	0.92	0.34	66%	
Tinted	Amber LE35	0.29	22%	56%	18%	0.76	0.25	75%	
Double Pane									
Clear	Amber 35	0.37	53%	61%	28%	0.42	0.32	68%	
Clear	Neutral 35	0.59	24%	19%	32%	0.46	0.51	49%	
Clear	Nickel 50	0.55	28%	25%	45%	0.45	0.48	52%	
Clear	Night Vision 25	0.57	24%	8%	22%	0.47	0.49	51%	29%
Clear	Night Vision 15	0.46	40%	11%	14%	0.46	0.4	60%	43%
Clear	Prestige 70	0.64	15%	13%	62%		0.56	44%	21%
Clear	Silver 20	0.37	55%	58%	15%	0.45	0.33	67%	
Clear	Silver 35	0.49	38%	41%	32%	0.45	0.43	57%	
Clear	Amber LE35	0.37	51%	57%	28%	0.39	0.32	68%	
Double Pane									
Tinted	Amber 35	0.3	22%	61%	16%	0.42	0.26	74%	
Tinted	Neutral 35	0.45	12%	19%	19%	0.46	0.39	61%	
Tinted	Nickel 50	0.42	13%	24%	27%	0.45	0.36	88%	
Tinted	Night Vision 25	0.43	12%	8%	13%	0.47	0.37	63%	27%
Tinted	Night Vision 15	0.37	17%	11%	8%	0.46	0.32	68%	37%
Tinted	Prestige 70	0.48	12%	12%	37%	0.42	0.58	20%	20%
Tinted	Silver 20	0.31	23%	58%	9%	0.45	0.27	73%	
Tinted	Silver 35	0.38	16%	41%	19%	0.45	0.33	67%	
Tinted	Amber LE35	0.29	21%	57%	16%	0.39	0.26	74%	

U-value: The ability to prevent thermal energy loss

G-value: Solar Heat Gain Coefficient

TSER: Total Solar Energy Rejected

Exterior film light transmission table:

Glass type	Film Type	Shading Coefficient	Visible Reflection Exterior	Visible Reflection Interior	Visible Light Transmission	U-value	G-value	TSER	Heat Gain Reduction
Single Pane									
Clear	Prestige40 EX	0.45	6%	42%	61%	1.08	0.39	52%	
Clear	Prestige70 EX	0.55	7%	70%	52%	1.46	0.47	41%	
Clear	Prestige90 EX	0.74	9%	88%	36%	1.38	0.67	21%	
Clear	Silver 35 EX	0.41	35%	36%	35%	1.02	0.36	64%	56%
Clear	Bronze 20 EX	0.26	32%	33%	23%	1.02	0.22	78%	73%
Clear	Neutral 35 EX	0.56	10%	13%	44%	0.9	0.49	51%	56%
Clear	Silver 15 EX	0.22	61%	56%	17%	1.02	0.19	81%	77%
Single Pane									
Tinted	Prestige40 EX	0.39	5%	25%	66%	0.74	0.34	47%	
Tinted	Prestige70 EX	0.45	6%	42%	61%	1.08	0.39	38%	
Tinted	Prestige90 EX	0.58	7%	53%	50%	1.06	0.5	21%	
Tinted	Silver 35 EX	0.34	35%	16%	21%	1.02	0.3	70%	53%
Tinted	Bronze 20 EX	0.21	32%	15%	14%	1.02	0.19	81%	70%
Tinted	Neutral 35 EX	0.47	10%	8%	27%	1.02	0.41	59%	34%
Tinted	Silver 15 EX	0.18	61%	23%	10%	1.02	0.16	84%	75%
Double Pane									
Clear	Prestige40 EX	0.33	7%	37%	71%	1.28	0.29	59%	
Clear	Prestige70 EX	0.45	12%	63%	61%	1.62	0.39	44%	
Clear	Prestige90 EX	0.64	16%	78%	44%	1.39	0.56	21%	
Clear	Silver 35 EX	0.33	36%	37%	32%	0.47	0.29	71%	56%
Clear	Bronze 20 EX	0.19	33%	35%	21%	0.47	0.17	83%	76%
Clear	Neutral 35 EX	0.43	12%	18%	40%	0.47	0.38	62%	46%
Clear	Silver 15 EX	0.17	61%	54%	15%	0.47	0.14	86%	79%
Double Pane									
Tinted	Prestige40 EX	0.27	6%	22%	77%	0.96	0.23	54%	
Tinted	Prestige70 EX	0.33	7%	38%	71%	1.31	0.29	39%	
Tinted	Prestige90 EX	0.47	9%	47%	59%	1.15	0.41	20%	
Tinted	Silver 35 EX	0.25	35%	21%	19%	0.47	0.22	78%	53%
Tinted	Bronze 20 EX	0.15	32%	20%	12%	0.47	0.13	87%	75%
Tinted	Neutral 35 EX	0.34	10%	14%	24%	0.47	0.29	71%	42%
Tinted	Silver 15 EX	0.13	61%	27%	9%	0.47	0.11	89%	78%

U-value: The ability to prevent thermal energy loss

G-value: Solar Heat Gain Coefficient

TSER: Total Solar Energy Rejected

Other 3M Energy Conservation Films include:

- 3M™ Neutral Series
- 3M™ Nickel 50
- 3M™ Silver Series
- 3M™ Bronze 20 Exterior

General notes:

All technical data is based on a combination of relevant European test methods and/or US test methods. Before using this product the customer / applicator must ensure the product is suitable to be used for the intended purpose. If there is any uncertainty, please check with your local 3M Window Film specialist. All issues regarding warranty and liability for the product and the effect of its use are governed in accordance with the provisions of the appropriate contract of sale unless local laws dictate otherwise.

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