



## Performance Data

Technical data according to EN 410 and EN 673*	4 mm single	4/16/4 mm double
Solar Energy Transmission, $\tau_e$	82%	73%
Solar Energy Reflection, $\rho_e$	8%	14%
Solar Energy Absorbtion, $\alpha_e$	10%	13%
Visible Light Transmission, $T_V$	90%	82%
Visible Light Reflection (External), $\rho_{ve}$	9%	15%
Visible Light Reflection (Internal), $\rho_{vi}$	9%	15%
Ultraviolet Transmission, $\tau_{UV}$	<1%	
Ultraviolet Rejection	>99 %	
g value	0.85	0.78
Shading Coefficient	0.97	0.9
Total Solar Energy Rejected	15%	22%
Glare Reduction	<1 %	
U value, single glazing (W/m <sup>2</sup> .K)	5.9	
U value, double glazing, Air filled (W/m <sup>2</sup> .K)		2.8
Emissivity, $\epsilon_n$	0.91	
Colour Rendering Index, $R_a$	>99	99
Film Colour / Appearance	Clear	
Installation position	Internal	
Manufacturer's Limited Warranty**: 10 Years		

Installation Notes: Safety and security films must be installed by trained and qualified personnel. Use Film On for installation.

Please check the complete Film to Glass Thermal Stress Compatibility Guidelines before film installation; Contact Eastman Performance Films for full details.

\*The properties reported for LLumar architectural window films were calculated using EN410 methodology for film applied to single pane (4mm clear glass) and dual pane glazing (4mm clear glass panes, 16mm air space). Reported values were calculated from representative product samples. Actual performance may vary based on a number of factors, including glass properties, and standard manufacturing variances. Solar spectrum used: UV 300-380nm, Visible Light 380-780nm, IR 780-2500nm.

\*\*Manufacturer's Limited Warranty validity: Europe only. Certain restrictions apply, see authorized dealer for warranty details.

Datasheet created on 20/02/19. For a more recent version please contact your LLumar representative.

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