

## Performance Data



Technical data according To EN 410 and EN 673*	4 mm single	4/16/4 mm double
Solar Energy Transmission, $\tau_e$	20%	19%
Solar Energy Reflection, $\rho_e$	41%	39%
Solar Energy Absorbtion, $\alpha_e$	39%	42%
Visible Light Transmission, $\tau_v$	28%	26%
Visible Light Reflection (External), $\rho_{ve}$	36%	38%
Visible Light Reflection (Internal), $\rho_{vi}$	38%	39%
Ultraviolet Transmission, $\tau_{uv}$	<1%	
Ultraviolet Rejection	>99 %	
g value	0.27	0.38
Shading Coefficient	0.34	0.48
Total Solar Energy Rejected	73%	62%
Glare Reduction	69%	68%
U value, single glazing (W/m <sup>2</sup> .K)	4.19	
U value, double glazing, Air filled (W/m <sup>2</sup> .K)		2.3
Emissivity, $\epsilon_n$	0.32	
Colour Rendering Index, $R_a$	92	
Film Colour / Appearance	Neutral Bronze	
Installation position	Internal	
Warranty**: 5 Years		

Installation Notes: Not for use on glazing where condensation may occur. Edge sealing required. X-100 must not be used to install this film. 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 solar performance data reported for LLumar architectural window films was measured and/or calculated using EN410 methodology for glazing solar performance measurement as measured on single pane, 4mm clear glass. Reported values are taken from representative product samples and are subject to normal manufacturing variances. Actual performance will vary based on a number of factors, including glass type and properties.

\*\*Warranty validity: UK only

Datasheet created on 17/05/17. For a more recent version please contact your LLumar representative.

© 2017 Eastman Chemical Company. LLumar® and the LLumar® logo are trademarks of Eastman Chemical Company or one of its wholly owned subsidiaries. The © used herein denotes registered trademark status in the US; marks referenced herein may also be registered internationally. Visual renderings are for illustrative purposes only, actual appearance may vary. All rights reserved. No liability is accepted for errors. Although the information and recommendations set forth herein (hereafter "Information") are presented in good faith and believed to be correct as of the date hereof, neither Eastman Chemical Company nor any of its subsidiaries or affiliates (collectively, "Eastman") makes any representations or warranties as to the completeness or accuracy thereof and assumes no obligation to update any of the Information. Information is supplied upon the condition that the persons receiving same will make their own determinations as to its suitability for their purposes prior to use. In no event will Eastman be held responsible for damages or liability of any nature whatsoever, including without limitation, for direct, indirect or consequential loss, business interruption, loss of profits, production, goodwill or contracts, or anticipated savings, resulting from the use of or reliance upon the Information or the product to which the Information refers. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any other nature are made hereunder with respect to information or the product to which information refers.