## Sputtered Dark Neutral 100µ

N 1020 SR PS 4

## **Performance Data**



Technical data according To EN 410 and EN 673*	4 mm single	4/16/4 mm double
Solar Energy Transmission, τ <sub>e</sub>	23%	20%
Solar Energy Reflection, $\rho_{\text{e}}$	21%	24%
Solar Energy Absorbtion, $\alpha_{\text{e}}$	56%	
Visible Light Transmission, τ <sub>v</sub>	24%	22%
Visible Light Reflection (External), $\rho_{\text{ve}}$	25%	29%
Visible Light Reflection (Internal), $\rho_{\text{vi}}$	27%	
Ultraviolet Transmission, T <sub>uv</sub>	<1%	
Ultraviolet Rejection	>99 %	
g value	0.36	0.53
Shading Coefficient	0.45	0.66
Total Solar Energy Rejected	64%	47%
Glare Reduction	74%	73%
U value, single glazing (W/m².K)	5.89	
U value, double glazing, Air filled (W/m².K)		2.73
Emissivity, $\epsilon_n$	0.89	
Colour Rendering Index, R <sub>a</sub>	98	99
Film Colour / Appearance	Neutral	
Installation position	Internal	

Warranty\*\*: 7 Years

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

Datasheet created on 10/06/16. For a more recent version please contact your LLumar representative.

© 2016 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 informationally. Usual renderings are for illustrative purposes only, actual appearance may vary. 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.

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