



## Performance Data

Technical data according to EN 410 and EN 673*	4 mm single	4/16/4 mm double
Solar Energy Transmission, $\tau_e$	44%	39%
Solar Energy Reflection, $\rho_e$	6%	8%
Solar Energy Absorbtion, $\alpha_e$	50%	53%
Visible Light Transmission, $T_V$	78%	70%
Visible Light Reflection (External), $\rho_{ve}$	8%	13%
Visible Light Reflection (Internal), $\rho_{vi}$	8%	15%
Ultraviolet Transmission, $\tau_{UV}$	<1%	
Ultraviolet Rejection	>99 %	
g value	0.56	0.46
Shading Coefficient	0.64	0.53
Total Solar Energy Rejected	44%	54%
Glare Reduction	14%	
U value, single glazing (W/m <sup>2</sup> .K)	5.71	
U value, double glazing, Air filled (W/m <sup>2</sup> .K)		2.72
Emissivity, $\epsilon_n$	0.9	
Colour Rendering Index, $R_a$	94	93
Film Colour / Appearance	Light Blue	
Installation position	External	
Manufacturer's Limited Warranty**: 7 Years vertical / 5 Years sloping		

Installation Notes: Please follow Technical Bulletin 73 Installation, sealing and splicing guidelines

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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# Helios 80

THE 80 BL ER HPR

## Features And Benefits



- Light blue/green tint - complements natural slight green tint in clear glass
- 'Clear' solar control exterior grade film
- Used where a combination of extremely low visible reflectance, high light transmission, and substantial reduction in solar infrared transmission are needed
- Optically clear with advanced nano-ceramic infrared reducing technology
- Recommended for shop front windows, museums and historic buildings and other applications where high visible light transmission is desired.
- Helios technology includes hydrophobic (water resistance), oleophobic (oil resistance) and UV blocking, giving excellent weather resistance and durability
- Patented coating technology that has resulted in a durable and easy to clean product.
- Rejects up to 44% of solar energy, helping reduce heat build-up, and energy costs, increasing occupant comfort.
- Shields >99% of UV radiation, helping to reduce fading of valuables, fabrics and furnishings
- Spectrally selective technology allowing good visible light transmission with high solar energy rejection
- Exterior installation