

Dual Reflective Helios Dark Neutral

VHE 14 ER HPR



Performance Data

Technical data according to EN 410 and EN 673*	4 mm single	4/16/4 mm double
Solar Energy Transmission, τ_e	7%	6%
Solar Energy Reflection, ρ_e	56%	57%
Solar Energy Absorption, α_e	37%	
Visible Light Transmission, T_V	9%	
Visible Light Reflection (External), ρ_{ve}	58%	
Visible Light Reflection (Internal), ρ_{vi}	24%	28%
Ultraviolet Transmission, τ_{UV}	<1%	
Ultraviolet Rejection	>99 %	
g value	0.16	0.11
Shading Coefficient	0.18	0.13
Total Solar Energy Rejected	84%	89%
Glare Reduction	90%	89%
U value, single glazing (W/m ² .K)	5.71	
U value, double glazing, Air filled (W/m ² .K)		2.72
Emissivity, ϵ_n	0.76	
Colour Rendering Index, R_a	85	84
Film Colour / Appearance	Neutral Reflective	
Installation position	External	
Manufacturer's Limited Warranty**: 10 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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Features And Benefits



- Neutral solar control and privacy exterior grade film
- “One Way Mirror” – Daylight privacy
- Used where an exterior application is critical to provide excellent heat and glare reduction are desired for rapid return on investment
- Provides our highest level of daytime privacy with optical transparency
- One-way privacy with low interior reflection allows improved visibility to the outside while preserving privacy
- 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 84% 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
- Reduces glare, which is a contributor to eye fatigue
- Exterior installation