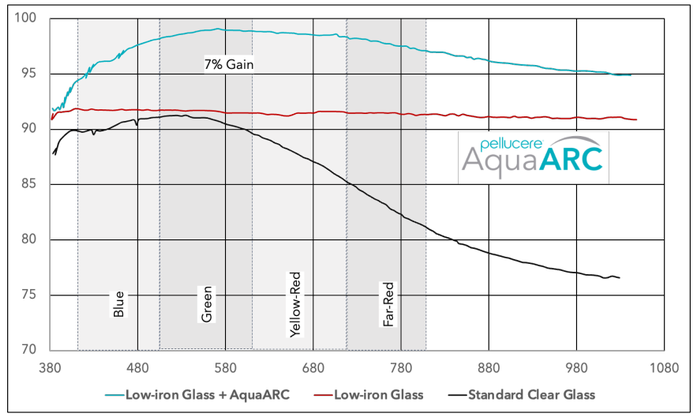
Brighter, Greener, Better

Pellucere AquaARC delivers industry-leading transmission for lighting, green house glass, and other float glass applications. Designed to allow for two-sided glass coating using standard wet deposition technology, with TrueColor VLT transmission, and zero VOCs, and the lowest total cost of any competing ARC, Pellucere AquaARC is the right solution for technical float glass.

Pellucere AquaARC Transmission Gain
(Perkin-Elmer Lamda 1050)



- Blue light (400-500 nm) – promotes growth and strong/healthy stems.
- Green light (510–610 nm) improves photosynthesis to accelerates growth.
- Yellow-red light (610–700 nm) best wavelength for chlorophyll absorption, germination, and flower or bud development.
- Far-red light (700–800 nm) increases the rate of photosynthesis / promotes extension growth.

Mechanical & Chemical Durability Tests

Analysis Item	Test Condition	Pellucere AquaARC
Salt Spray Test	As per IEC 61701 conditions	√ Pass (ΔT ≤ 0.8%)
Acid Resistance Test	HCL Solution Dip (23±2°C)	√ Pass (No Change)
Outdoor Exposure Test	As per IEC 61215; 60 Kwh/m²	√ Pass
Pencil Hardness Test	As per GB/T6739 Hardness pencil not making scratches >3mm	√ Pass (≥3H)
Abrasion Resistance Test	EN1096-2 Felt counterface, 1000 cycles	√ Pass (No Change)
Damp Heat Test	As per IEC 61215	√ Pass (ΔT ≤ 0.5%) after 1000 hrs
Thermal Cycling Test	As Per IEC61215 Temperature: 40˚/+85˚C	√ Pass (No Change) after 300 cycles
PCT Test	2 ATM, 121˚C, 98% RH, 48 hours	√ Pass (No Change)
Boiling Water Test	Submersion in boiling water 10 minutes	√ Pass (No Change)

Invent With Us!

Pellucere is a science-driven, technology-forward company. Leveraging our expertise in nano-chemistry and application technology, we can develop tailored solutions and formulations to meet your specific needs. Contact us if you would like to discuss options to collaborate on new products and applications.

pellucere® AquaARC

Anti-Reflective Coatings For Green House Glass and High-Performance Lighting

Green House Float Glass

Better PAR, Water Sheening

Ask Us

Ask about our solvent products for etched and patterned glass.

Pellucere AquaARC is a field-proven, anti-reflective coating ideal for green house float glass. Its delivers industry-leading gains in photosynthetically active radiation (PAR) and hemispherical transmission, delivering up to 7% PAR gain on direct axis. It provides superior off-axis light capture for maximum all-season performance. Its hydrophilic surface structure maximizes water sheening for condensation to eliminate droplets that interfere with light transmission and create a "rain effect." AquaARC is an environmentally-friendly water-based AR coating with zero VOCs to minimize emissions during the coating process.

With Pellucere AquaARC the Benefits are Clear

01 Maximize PAR & Hemispherical Transmission
- Maximum PAR transmission with up to 7% gain
- Superior off-axis light capture year-round

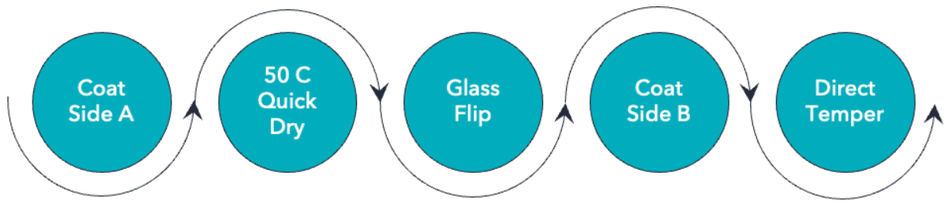
02 Designed for Durability
- Passes EN-1096 Class A
- Works with standard cleaning systems

03 Hydrophilic Water Sheening
- Sheens condensation to minimize light impact
- Guides water to gutter / recapture system

04 Aqueous Solution
- Lower-cost wet deposition process
- Zero VOCs

Formulated for Two-Sided Wet Deposition

Pellucere AquaARC is formulated to easily enable defect-free two-sided coatings using a standard wet-deposition process like roll coating and a low temperature quick-dry (~50° C) to allow the coated glass to be handled using standard industrial machinery.



High Performance Lighting

More Light, Better Coverage, Less Soil

pellucere AquaARC

Pellucere AquaARC offers double-sided roll coating for high performance lighting. With up to 7% direct axis VLT gain and up to 16% off-axis VLT gain, Pellucere AquaARC delivers maximum light propagation to the widest possible area, reducing CAPEX and saving on energy costs.

AquaARC delivers ColorTrue transmission with minimal color shift, while its hydrophilic surface structure, Pellucere AquaARC helps reduce dust adhesion while the hydrophilic surface spreads the water to minimize optical interference from wet cover glass.

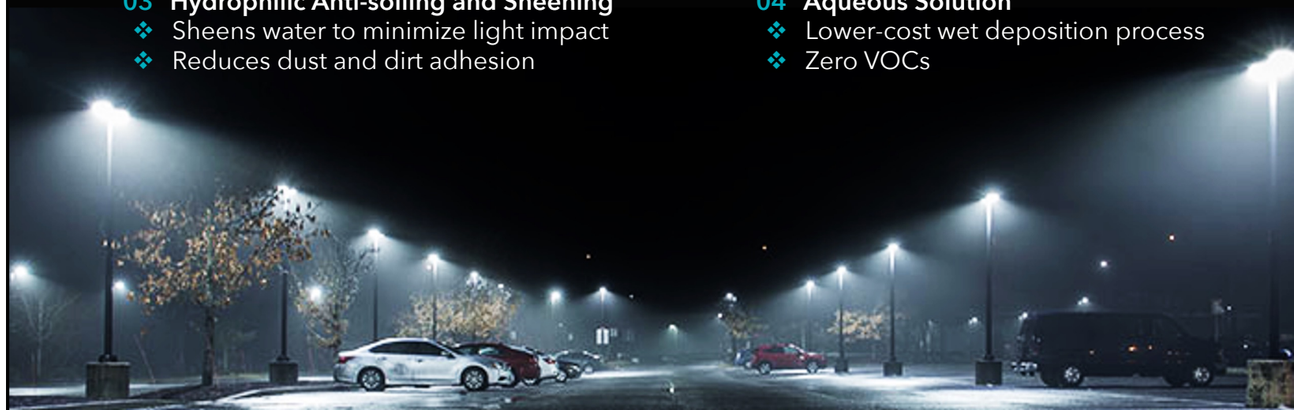
AquaARC Outperforms Sputtered Metal Oxide (SMO) ARC

		Weighted Transmittance (%)		ΔCCT (k) (2 deg Observer)		Whiteness Index (2 deg Observer)		b' (arb. Units) Transmitted Light	
Light Source	Nominal CCT (K)	SMO	**Aqua ARC**	SMO	**Aqua ARC**	SMO	**Aqua ARC**	SMO	**Aqua ARC**
Archipelago	2100K	98.3	**98.4**	0.41	**8.07**	96.2	**98.2**	1.94	**0.2**
Cree A	2700K	98.3	**98.6**	-4.42	**8.32**	92.8	**97.9**	3.13	**0.37**
Cree B	4000K	98.1	**98.6**	-34.34	**8.99**	90	**97.6**	2.65	**0.36**
T12 Fluorescent	2900K	97.8	**98.6**	-16.53	**8.67**	87	**97.4**	4.68	**0.53**

With Pellucere AquaARC the Benefits are Clear

01 Direct Axis & Off-Axis Transmission
- Direct Axis up to 7% VLT gain
- Off-axis light VLT gain up to 16%

02 ColorTrue Transmission
- Does not filter out blue wavelengths
- Eliminates unwanted LED yellowing

03 Hydrophilic Anti-soiling and Sheening
- Sheens water to minimize light impact
- Reduces dust and dirt adhesion

04 Aqueous Solution
- Lower-cost wet deposition process
- Zero VOCs