Glinttone™ II – Defensive Disclosure

Published by DRIDON LLC
Date: September 16, 2025

Disclosure Notice:

This document is published solely for the purpose of establishing prior art and preventing the patenting of the ideas described herein by any third party. All rights are reserved by DRIDON LLC.

No part of this publication — including its concepts, methods, systems, or designs — may be used, reproduced, adapted, implemented, or incorporated into any product or service without the explicit, written permission of DRIDON LLC. This disclosure serves to place the invention in the public record and to block future patent claims, but it does not grant permission for any form of use, derivative work, or commercialization.

****

TITLE: Glinttone™ II: Angle-Controlled Dynamic Tinting Glass Using Total Internal Reflection—a Sequel to Glinttone™ and Glinttone™ I

---

1. Introduction

Glinttone™ II is the second in a series of innovations aimed at revolutionizing dynamic light control in transparent surfaces. It builds on the vision established in **Glinttone™ I**, which introduced a novel mechanism for achieving real-time tinting without the drawbacks of conventional smart glass technologies.

Glinttone™ I, in turn, is the first entry in the modern **Glinttone™ Series**, and traces its conceptual roots to the original **Glinttone™ (1988)** — a pioneering system that used liquid-based tinting media to modulate light.

This evolutionary lineage demonstrates a long-standing commitment to solving light control challenges through diverse, physics-based innovations — culminating in the purely optical, angle-driven mechanism of **Glinttone™ II**.

While **Glinttone™ I** uses **diffraction** — specifically a triple-slit interference mechanism to create obfuscation — **Glinttone™ II** takes a completely different path. It is based on **geometric optics**, utilizing **angle-tuned total internal reflection (TIR)** to dynamically control the transmission and reflection of light through glass.

This divergence demonstrates that the effect of adaptive tinting can be achieved via multiple independent optical principles. Glinttone™ II's approach emphasizes mechanical simplicity, instantaneous responsiveness, and material-free operation, making it especially suited for scalable deployment in architecture, mobility, aerospace, and other environments where passive control and reliability are essential.

---

2. Key Advantages of Glinttone™ II

- **Fast Light Modulation:** Achieved through simple adjustment of incident angle; no chemical or electrical delay
- **No Reactive Films:** No reliance on nanoparticles, electrochromics, or thermochromics
- **Scalable:** Works on various substrate sizes — from small panels to building façades
- **Automatable:** Angle control can be governed by AI, presets, or manual input
- **Low Energy Use:** No need for electrical switching layers — purely optical mechanism

---

3. Comparison Table: Traditional vs. Glinttone™ Platform

Feature	**Traditional Glazing / Smart Glass**	**Glinttone™ Solution**
Heat Management	Manual shutters, blinds, or fixed coatings; blocks daylight	AI-controlled multi-layered glass that reflects heat in summer, absorbs warmth in winter, while maintaining visibility
Light Control	All-or-nothing tinting or full blackout	Variable tinting with daylight preservation—reduces glare while retaining natural light
Adaptation Mechanism	Passive thermochromic or manual switches	Predictive AI engine adjusts in real time using seasonal trends, user preferences, and sensor data
Climate Curation	Not available	Lets users select immersive presets (e.g., Tropical, Nordic, Desert) or activate Auto-AI mode
Mood & Circadian Support	No biological consideration	Supports mental wellness and circadian rhythms through controlled natural light exposure

Feature	Traditional Glazing / Smart Glass	Glinttone™ Solution
Building Integration	Standalone or isolated upgrade	Integrated into dynamic building envelopes, smart homes, vehicles, or commercial systems
User Control	Manual tint switch or app toggle	Dual-mode control: fully autonomous or user-curated climate presets for personal comfort
Energy Benefits	HVAC-intensive, dependent on blinds or curtains	Reduces HVAC load, boosts daylighting, and improves psychological and thermal comfort simultaneously
System Intelligence	Rule-based or passive	AI-driven, weather-aware, learning from local conditions, time of day, and human habits
Aesthetic Freedom	Light-blocking shades that obscure view	Maintains transparent beauty, enhances natural connection, eliminates visual confinement
Optical Mechanism	Chemical-based tinting or physical barriers	**Geometrical optics via angle-controlled TIR** — fast, reliable, and material-free
Response Time	Seconds to minutes depending on system	**Instantaneous** — angle adjustment triggers immediate light regulation
System Complexity	Requires embedded films or electric tinting grids	**No reactive materials; geometry-only control mechanism**

4. Differentiation from Glinttone™ I and Glinttone™ (1988)

The **Glinttone™ Series** spans over three decades of innovation in dynamic light control. The Series traces its origins to 1988 when it was conceptualized, developed and prototyped. Subsequent generations — *Glinttone™ I* and *Glinttone™ II* — were conceived and refined over 30+ years, marking a shift from early material-based methods to advanced optical control systems. Each generation builds on the foundational principles of the one before it while diverging in physical mechanisms and intended applications:

---

i).. Glinttone™ (1988): Liquid-Based Modulation

The original **Glinttone™ (1988)** pioneered the use of liquid-based tinting media to modulate light transmission. It operated by manipulating the optical properties of controlled fluid layers — such as color saturation or refractive index — to produce transitions in transparency.

Selecting the ideal liquid proved a significant challenge. The medium had to maintain optical clarity, thermal stability, and appropriate viscosity, while resisting degradation over time. In practice, the system faced several physical and operational limitations:

- Condensation would form between layers, especially under thermal cycling, degrading visibility.

- The meniscus effect caused liquid edges to cling to the glass surface, distorting light and interfering with uniform modulation.

- Material changes were required to adjust the optical state, leading to slower response times and increased mechanical complexity.

While groundbreaking for its time, the approach lacked the responsiveness, scalability, and reliability needed for modern, high-performance applications — but it laid the conceptual foundation for the **Glinttone™ Series** that followed.

ii).. Glinttone™ I: Diffraction via Triple-Slit Interference

Building on the conceptual foundation laid by Glinttone™ (1988), **Glinttone™ I** marked a significant shift from material-based light control to physics-driven modulation. While the original 1988 system used liquid media to alter transparency, it was limited by condensation, edge-sticking phenomena (meniscus effect), and the complexities of fluid behavior. These constraints prompted a move toward non-material-dependent solutions.

Glinttone™ I introduced a novel approach rooted in wave optics, specifically the use of triple-slit interference to manipulate how light propagates through transparent surfaces. By creating controlled patterns of destructive interference, the system could cancel or obfuscate portions of the light spectrum in real time — without relying on chemical reactions, pigments, or applied films.

This diffraction-based architecture allowed for:

- Patterned obfuscation or selective shading zones
- Faster response times than material-based systems
- Enhanced precision and design flexibility

However, as a wave-optical system, **Glinttone™ I** required precise alignment and was best suited for localized privacy control rather than full-surface dynamic tinting.

Still, it demonstrated a key insight: adaptive light control can be achieved entirely through optical geometry, not just materials. This insight would eventually lead to the development of **Glinttone™ II**, which builds on this principle using an entirely different branch of optics — geometric reflection and refraction — to achieve broader, faster, and more scalable results.

Brand Messaging

The Moment Is Primed. The Future Is Glinttone™.
Intelligent, adaptive glass for an adaptive world.
Where Optics Meet Intelligence

Publication Information

- **Document ID: GLINTTONE_Defensive_Disclosure_September-16-2025**
- **Version:** 1.0
- **Authored and published by: DRIDON LLC**
- **Affiliation:** Glinttone™ (1988), Glinttone™ I & Glinttone™ II
- **Date: September 16, 2025**
- **Contact: info@glinttone.com**

Disclosure Statement

This document is intended to serve as a defensive publication. It publicly discloses the invention to establish prior art under patent law and precludes others from claiming identical or substantially similar inventions.

****

GLINTTONE™
Where Optics Meet Intelligence