

Acoustic Performance Report

Sound Reduction Data — Laminated IGU Systems

Report Reference	IPH/KC/R2/2026
Prepared by	IPH Glasses Mahavir Glass Enterprise
Acoustic Standard	EN ISO 10140-2 / EN ISO 10140-3
Database	Guardian Acoustic Database 20221229
Date	June 2026
Application	Architectural / Façade — Laminated IGU

1. Overview

IPH Glasses provides certified acoustic performance data for all laminated IGU configurations as part of our technical knowledge service. The data in this report has been generated using the Guardian Glass Acoustic Calculator, certified against the Guardian Acoustic Database (20221229) under EN ISO 10140-2/3. Four IGU configurations have been evaluated, covering a range of outer and inner lite thicknesses to suit different acoustic design requirements.

2. Acoustic Performance Summary

Config	Glazing Build-up	Rw (dB)	C (dB)	Ctr (dB)	OITC	STC	Status
AC-01	8mm Float Glass + 16mm Cavity + 8.76mm (44.2) LamiGlass (PVB)	37	-1	-5	31	37	Certified
AC-02	8mm Float Glass + 16mm Cavity + 10.76mm (55.2) LamiGlass (PVB)	41	-1	-4	35	41	Certified
AC-03	10mm Float Glass + 16mm Cavity + 8.76mm (44.2) LamiGlass (PVB)	40	-2	-5	33	40	Estimated
AC-04	10mm Float Glass + 16mm Cavity + 10.76mm (55.2) LamiGlass (PVB)	40	-2	-5	33	40	Estimated

3. Detailed Configuration Sheets

Configuration AC-01: 8mm Float Glass + 16mm Cavity + 8.76mm (44.2) LamiGlass (PVB)

Configuration ID	AC-01
Glazing Build-up	8mm Float Glass + 16mm Cavity + 8.76mm (44.2) LamiGlass (PVB)
Data Status	Certified
Standard	EN ISO 10140-2 / EN ISO 10140-3
Database	Guardian Acoustic Database 20221229

Sound Reduction Indices — Frequency Bands (1/3 octave)

125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
27 dB	27 dB	35 dB	42 dB	42 dB	56 dB

Single-Number Ratings

Rw (dB)	C (dB)	Ctr (dB)	OITC	STC
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37	-1	-5	31	37
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Configuration AC-02: 8mm Float Glass + 16mm Cavity + 10.76mm (55.2) LamiGlass (PVB)	
Configuration ID	AC-02
Glazing Build-up	8mm Float Glass + 16mm Cavity + 10.76mm (55.2) LamiGlass (PVB)
Data Status	Certified
Standard	EN ISO 10140-2 / EN ISO 10140-3
Database	Guardian Acoustic Database 20221229

Sound Reduction Indices — Frequency Bands (1/3 octave)

125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
26 dB	31 dB	42 dB	43 dB	43 dB	57 dB

Single-Number Ratings

Rw (dB)	C (dB)	Ctr (dB)	OITC	STC
41	-1	-4	35	41

Configuration AC-03: 10mm Float Glass + 16mm Cavity + 8.76mm (44.2) LamiGlass (PVB)	
Configuration ID	AC-03
Glazing Build-up	10mm Float Glass + 16mm Cavity + 8.76mm (44.2) LamiGlass (PVB)
Data Status	Estimated
Standard	EN ISO 10140-2 / EN ISO 10140-3
Database	Guardian Acoustic Database 20221229

Sound Reduction Indices — Frequency Bands (1/3 octave)

125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
29 dB	33 dB	41 dB	41 dB	40 dB	57 dB

Single-Number Ratings

Rw (dB)	C (dB)	Ctr (dB)	OITC	STC
40	-2	-5	33	40

Configuration AC-04: 10mm Float Glass + 16mm Cavity + 10.76mm (55.2) LamiGlass (PVB)	
Configuration ID	AC-04
Glazing Build-up	10mm Float Glass + 16mm Cavity + 10.76mm (55.2) LamiGlass (PVB)
Data Status	Estimated
Standard	EN ISO 10140-2 / EN ISO 10140-3
Database	Guardian Acoustic Database 20221229

Sound Reduction Indices — Frequency Bands (1/3 octave)

125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
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28 dB	31 dB	39 dB	43 dB	49 dB	61 dB
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Single-Number Ratings

Rw (dB)	C (dB)	Ctr (dB)	OITC	STC
40	-2	-5	33	40

4. Key Acoustic Terms

Rw — Weighted Sound Reduction Index: Single-number rating (dB) characterising airborne sound insulation per EN ISO 717-1. Higher Rw = better acoustic performance.

C — Adaptation Term for Pink Noise: Correction applied to Rw for A-weighted pink noise sources (typical interior noise, traffic at medium speed). Rw + C gives practical performance.

Ctr — Adaptation Term for Urban Traffic: Correction for low-frequency dominated traffic noise. Rw + Ctr is relevant for sites near highways, railways, or aircraft paths.

OITC — Outdoor/Indoor Transmission Class: US-based single-number rating that weights low-frequency transportation noise more heavily than STC.

STC — Sound Transmission Class: US-based single-number rating for airborne sound insulation. Higher STC = better performance.

5. Disclaimer

Acoustic performance data is based on test protocols or estimation using component-similarity assumptions derived from measured data and interpolation. Data is applicable for glazing dimensions of 1.23 m × 1.48 m as per testing standard. Actual performance may vary according to glazing dimensions, frame system, noise source characteristics, and installation conditions. Weighted values (Rw, C, Ctr) should be considered accurate within ±2 dB; wider deviations can occur. This data should not be used as a substitute for tests of actual glazing in the specific project configuration. Certified data is based on test protocols; Estimated data is based on interpolation. IPH Glasses recommends independent acoustic testing for noise-critical applications.