

1 Introduction

This document details the thermal performance calculation of the window configuration as detailed below.

The frame profile results detailed below are provided by computer simulation using LBL software program THERM 5.2 and validated against proofs in Annex D (D1 to D10) of BS EN ISO 10077-2:2012. The frame profile results detailed below are provided from methods contained in BS EN ISO 10077-1:2006 and in accordance with thermal transmittance requirements detailed in BS EN 14351-1:2006+A1:2010.

2 Summary of Results

2.1 Frame thermal transmittance (in accordance with BS EN ISO 10077-1:2006)

Frame Profile	Frame Thermal Transmittance (U_f)
Head	1.2 W/m ² K
Sill	1.3 W/m ² K
Upper Jambs	1.2 W/m ² K
Lower Jambs	1.4 W/m ² K
Meeting Rail	2.3 W/m ² K

2.2 Linear thermal transmittance (in accordance with BS EN ISO 10077-2:2012)

Frame Profile	Linear Thermal Transmittance (ψ)
Head	0.037 W/m.K
Sill	0.039 W/m.K
Upper Jambs	0.037 W/m.K
Lower Jambs	0.039 W/m.K
Meeting Rail	0.080 W/m.K

2.3 Centre pane U-Value of glazing calculated in accordance with BS EN 673:2011

Glazing unit	Centre pane U-value (U_g)
Nominal dimensions 4-20-4 90% argon 10% air filled, normal emissivity 0.01 (4mm float, 20mm Thermobar spacer, 4mm low-e glass)	1.1 W/m ² K

2.4 U-Value

The thermal performance of the window (U_w) in accordance with EN ISO 10077-1:2006 is:

1.3 W/m²K

All profile calculations based on BS EN ISO 10077-2:2012

The legal validity of this report can only be claimed on presentation of the complete report.