Project Name:

Location:

1. Window Information

Profile System:

Transom Profile :

Mullion Profile :

Glass:

Glass ID	Type Description

2. Applied Load

Wind Load (W): kN/m^2

Horizontal live load (L): --

Dead load (Weight) (D): Self-weight of frame
Slef-weight of glass

Climatic conditions: Indoor-outdoor temperature difference in summer: Indoor-outdoor temperature difference in winter: K° K°

Part secturity factors:

For external loads: $\Phi_w =$

For temperature difference: $\Phi_T =$

3. Codes and Specifications

- DIN EN 1991-1-1, Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings, 2010-12.
- DIN EN 1991-1-1, National Annex – Nationally determined parameters, Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings, 2010-12.
- DIN EN 1991-1-4, Actions on structures – Part 1-4: General actions – Wind actions, 2010-12.
- DIN EN 1991-1-4, National Annex – Actions on structures – Part 1-4: General actions – Wind actions, 2010-12.
- DIN EN 1999-1-1, Design of aluminum structures – Part 1-1 General structural rules, 2014-03
- DIN EN 13830, Curtain wall product standard, 2015-07

4. Allowable Deflection

- In the in-plane direction, lower value of L/200 and 15 mm for profiles with span of 1 mm to unlimited.
- In the out-of-plane direction, lower value of L/300 and 3mm for profiles with span of 1 mm to unlimited.

5. Materials

- Properties of Aluminum

Young's modulus:	E = 68.9 GPa
Poisson ratio:	υ = 0.3
Tensile ultimate strength:	F_{tu} = 206.8 MPa
Tensile yield strength:	F_{ty} = 172.4 MPa
Tensile compressive strength:	F_{cy} = 172.4 MPa
Composite shear strength:	R_s = 93.1 MPa
0.2% apparent limit of elasticity of Al Mg Si 0.5 F22 in accordance with DIN 41 14, Part 1	$\beta_{0.2}$ = 160 MPa

- Properties of Thermal Break

			Polythermide (PT)	Polyamide (PA)
Shear strength at	- 20 °C	R_{USv_20}	93 N/m	
Shear strength at	+ 80 °C	R_{USv_80}	53 N/m	
Tensile strength at	- 20 °C	R_{USt_20}	170 N/m	
Tensile strength at	+ 80 °C	R_{USt_80}	100 N/m	
Elastic constant at	- 20 °C	c_{20}	132 N/mm^2	
Elastic constant at	+ 20 °C	c_{80}	112 N/mm^2	
Elastic constant at	+80 °C	c_{80}	90 N/mm^2	
Coefficient of thermal expansion:		α	23 e-06 1/K	