

## Wind Load Calculation (ASCE 7-16)

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Inputs	Value	Unit
Basic Wind Speed (V)	45	mps
Exposure Category	B	B, C, or D
Topographical Factor (Kzt)	0.85	
Directionality Factor (Kd)	1	
Height Above Ground (z)	0	m
Gust Speed Exponent (a)	7	
Nominal Height of Atmospheric Boundary Layer (zg)	274.32	m
Velocity Press. Coeff at height z (Kz)	0.76	
Ground Elevation Factor (Ke)	1	
Velocity Pressure at Height z (qz)	801.89595	N/m <sup>2</sup>
Gust Factor (G)	0.85	
 Hypotenous		
Height	2.4	m
Angle of Elevation (Theeta)	0.655	m
	15.83584618	degrees
 Thickness of Panel		
Area of Panel	0.035	m
No. Of Panels	2.645622	m
Total Area of Panels	2	
Windward/Leeward Area (Half Area)	5.291244	m <sup>2</sup>
Volume of Panel in Model	2.645622	m <sup>2</sup>
Mass of Solar Panel	0.09259677	m <sup>3</sup>
Required Density	28.5	kg
	307.7861139	