

















AIS Offers

Glazing selection Parameters

Parameters					Importance						
Aesthetic					Enhances look of the building						
Energy Efficiency					It is a combination of lighting & cooling energy saving						
Improved Day- lighting					Reduces artificial lighting requirement by using glazing						
Glare Reduction					It can defeat the purpose of using glass						
Glass	Colour	VLT	IR		ER	SF	SC	U value	RHG		
A	Shade	%	%		%	%		W/m2	W/m2.k		

Glazing Cost and Performance :



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High performance glasses are innovative products which are expensive but cost beneficial as the amount of heat gain is less and hence more energy saving.

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Energy and cost analysis

Orientation Analysis

Glass	VIT	SF	11-Value	Rate (Rs./	Daylight	Total Electricity	Annual Electricity	Annual Savings	Glazing	Extra Payment for	Payback
Giuss	V.L.	01	0-Value	sq. m.)	%	Consumption (KWH)	Cost (Rs.)	(Rs.)	(Rs.)	HP Glass (Rs.)	(Months)
base case	92	87	5.8	800	40	1715343	1,02,92,061		28,00,000		
HPG 1	35	46	5.8	1300	16	722184	43,33,104	59,58,956	45,50,000	17,50,000	3.5
HPG 2	43	48	5.8	1300	24	75334 8	45,20,090	57,71,971	45,50,000	17,50,000	3.6
HPG 3	46	47	5.8	1300	25	737392	44,24,355	58,67,706	45,50,000	17,50,000	3.6
HPG 4	56	48	5.8	1300	32	753023	45,18,137	57,73,924	45,50,000	17,50,000	3.6
HPG 5	25	35	5.8	1300	10	587213	35,23,276	67,68,785	45,50,000	17,50,000	3.1
HPG 6	35	46	5.8	1300	12	722303	43,33,819	59,58,242	45,50,000	17,50,000	3.5
HPG 7	39	52	5.7	1300	21	821483	49,28,898	53,63,163	45,50,000	17,50,000	3.9

Result:

Climatic and Shadow Analysis and Building Energy Simulations were conducted using 'Ecotect' software and 'Design Builder' software, respectively. The end results clearly showed that the glazing enabled a high level of both energy and cost savings.



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Daylight Analysis:





For a corporate building in Mumbai, daylight analysis was done for Clear Glass (VLT = 78%) and the high performance glass (VLT = 21%).

- Daylight analysis prevented overdesigning of the building and at the same time optimize VLT requirement.
- High performance glass was used to reduce cooling load without compromising on lighting load



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AIS-RENEW is a retrofitting solution, specially designed to give old buildings a new life.

This solution converts low performing fixed windows glass (SGU & DGU) of office buildings & stores into energy saving insulated glass units (DGU/TGU) simply by installing low-E glass from the inside.

AIS-RENEW enables achievement of the performance equivalent to DGU/TGU windows by attaching a pane of Low-E glass to the existing window pane from inside/outside.







Normally made from extra clear glass

AIS

- Wide variety of color tints available
- Works with a remote control device
- Activates in less than 10 microseconds
- Blocks off UV rays that are harmful
- Works in temperatures from 0° to 55°C
- Blocks up to 50% light in"Off"mode



AIS Pyrobel is the perfect solution against fire that helps reduce spread of fire and heat in times of an outbreak. It also helps in providing enough time to implement an evacuation plan.









Class is Green
Glass is a expensive building material.?
Excess use of glass in campus will lead to heat island effect.?
If WWR is kept more than 60%.?
Retrofitting of building demands dismantling of the glass for better performance of glass façade. It turns out to be expensive affair.

GLASS: Potential	Credit Categories	
<u>د</u>	Sustainable Sites	
Systen	Water Efficiency	
Rating	Energy Efficiency	
buiplin	Materials & Resources	
ш	Indoor Air Quality	



