

Energy Management Performance Data



Knowledge

Performance comparison chart

To assist with selecting Viridian products we have developed a performance comparison arranged into three tables:

- ◆ Viridian single glazing
- ◆ ThermoTech
- ◆ ThermoTech + Low E

These have been divided into three categories that shows by coloured bars the product's performance in relation to:

- ◆ Daylight transmission
- ◆ Solar control
- ◆ Insulation

These characteristics, along with colour and reflectivity, are the key performance attributes. Additional functions such as safety, security and noise attenuation can also be added to all glass types.

The number in the bar is the actual performance. Please note all performance data listed is 'glass only' data. For total window performance, please visit www.wers.net

- ◆ **Daylight** – is the product's visible light transmission as a percentage.
- ◆ **Solar** – is the solar heat gain coefficient (SHGC). The lower the number, the better the performance.
- ◆ **Insulation** – is the product's U Value. The lower the number the better performance.

High performance tones									
Product	Single glazing			ThermoTech			ThermoTech Low E		
	Daylight	Solar	Insulation	Daylight	Solar	Insulation	Daylight	Solar	Insulation
Viridian SuperGreen	67	0.52	5.8	59	0.39	2.7	55	0.35	1.9
Viridian SuperGrey	9	0.35	5.8	8	0.21	2.7	7	0.15	1.9
Viridian SuperBlue	56	0.52	5.8	47	0.39	2.7	43	0.34	1.9

Viridian **SuperGreen™** has the highest light transmission and Viridian **SuperGrey™** has the lowest of the high performance tones.

Viridian **SuperGrey™** has the highest solar performance. Its SHGC of only 0.35 eliminates the most solar heat.

With all the high performance tones Viridian **ThermoTech Low E™** has the best insulation. Note that solar control is also increased with very little loss of daylight.

Explanation of performance data tables

The following chart is an extract from the performance data table. The information is for the standard stock items in the Viridian Australia range. Not all manufactured or custom options have been included.

Product Name	Nominal Thickness	Visible			Solar		UV Trans.	U Value		SHGC	Shading Co.	Weight m ²
		Trans.	Ref. Out	Ref. In	Trans.	Ref.		Air	Argon			
SuperBlue	6+12+6	47	13	8	27	6	17	2.7	2.5	0.39	0.46	30
		1	2	3	4	5	6	7	8	9	10	

- Product name** – refer to product for more information. Where (#2) appears, this identifies the glass' coated surface that is glazed to the inside of a building or the inside of a ThermoTech unit.
- Nominal thickness** – the glass thickness or the makeup of a ThermoTech unit. The first number is the outer glass thickness, +12mm gap, then the thickness of the inner panel of the unit. Thickness tolerances are:
3-6mm (±0.2mm) 8-12mm (±0.3mm)
15mm (±0.5mm) 19mm (±1.0mm)
- Visible light transmission** – percentage of visible light passing directly through the glass. The wave length range for visible light is 380 to 780nm. The higher the percentage the more daylight.
- Visible light reflection** – percentage of visible light reflected toward the exterior.
- Solar transmission** – percentage of normally incident visible light and solar energy passing directly through the glazing. The wave lengths measured for solar energy is 300 to 2500nm.

- Solar reflection** – percentage of normally incident visible light and solar energy reflected toward the exterior.
- UV transmission** – the percentage of UV light transmitted measured in the light range of 300–380nm. The lower the number the better.
- U Value** – measurement unit is watts per m² per degree celcius (W/m²°C) and is a measure of the rate of heat gain or loss through glazing due to environmental differences between outdoor and indoor air.*
- SHGC (Solar Heat Gain Coefficient)** – the proportion of total solar radiation that is transferred through the glass at normal incidence. It comprises the direct solar transmission (5) and the part of the solar absorption dissipated inwards by radiation and convection. The lower the number the better the solar performance.*
- Shading coefficient** – the ratio of solar heat gain through the glass relative to that through 3mm clear glass. The lower the number the better the performance.

Note Data is based on laboratory spectrophotometric measurements and reduced using Windows software for AFRC 100–2001 conditions, which is the internationally recognised method for describing glass performance. The data is glass only and care should be exercised when evaluating manufacturer's published data that the same environmental conditions have been used.

*The published U Value is based on Glass Only and cannot be used for BCA Section J calculations where the total U Value is required.

Performance comparison chart

Product	Single Glazing			ThermoTech			ThermoTech Low E		
	Daylight	Solar	Insulation	Daylight	Solar	Insulation	Daylight	Solar	Insulation

VFloat™									
Clear	88	0.82	5.8	78	0.71	2.7	73	0.67	1.9
Grey	42	0.58	5.8	37	0.45	2.7	34	0.40	1.9
Green	77	0.61	5.8	68	0.50	2.7	63	0.45	1.9
Bronze	49	0.62	5.8	43	0.50	2.7	40	0.44	1.9

High Performance Tones									
SuperGreen	67	0.52	5.8	59	0.39	2.7	55	0.35	1.9
SuperGrey	9	0.35	5.8	8	0.21	2.7	7	0.15	1.9
SuperBlue	53	0.52	5.8	47	0.39	2.7	43	0.34	1.9

ComfortPlus™									
Grey 40	39	0.50	3.6	-	-	-	-	-	-
Green 71	71	0.50	3.6	-	-	-	-	-	-
Clear 82	82	0.68	3.6	-	-	-	-	-	-
Neutral 59	59	0.51	3.6	53	0.42	1.9	49	0.41	1.7
Grey 37	37	0.39	3.6	33	0.31	1.9	31	0.30	1.7
SuperGreen 49	49	0.36	3.6	44	0.29	1.9	40	0.27	1.7
SuperBlue 44	44	0.37	3.6	39	0.29	1.9	36	0.28	1.7

EVantage™									
Grey	32	0.41	3.8	29	0.33	2.0	27	0.31	1.8
Bronze	38	0.45	3.8	34	0.38	2.0	32	0.35	1.8
BlueGreen	56	0.45	3.8	51	0.38	2.0	47	0.36	1.8
Clear	68	0.63	3.8	61	0.56	2.0	57	0.53	1.8
SuperGreen	49	0.37	3.8	44	0.30	2.0	41	0.27	1.8
SuperBlue	39	0.36	3.8	35	0.29	1.9	33	0.27	1.8

EnviroShield Performance™									
ITO Clear 74	76	0.54	3.6	67	0.46	1.9	62	0.44	1.7
ITO Green 67	69	0.45	3.6	61	0.38	1.9	57	0.36	1.7
ITO Neutral 54	56	0.44	3.6	50	0.36	1.9	46	0.34	1.7
ITO Grey 33	35	0.35	3.6	31	0.27	1.9	29	0.26	1.7
ITO SuperGreen 45	46	0.34	3.6	41	0.26	1.9	38	0.25	1.7
ITO SuperBlue 40	41	0.34	3.6	36	0.26	1.9	34	0.25	1.7

Sunergy™									
Clear	69	0.61	4.2	62	0.53	2.1	57	0.50	1.8
Clear	68	0.59	4.1	60	0.51	2.1	56	0.48	1.8
Clear	67	0.58	4.1	60	0.50	2.1	55	0.47	1.8
Clear	66	0.57	4.1	59	0.49	2.1	55	0.46	1.8
Green	56	0.42	4.1	50	0.33	2.1	46	0.31	1.8

Viridian single glazing

Product Name	Nominal Thickness	Visible			Solar		UV Trans	U Value	SHGC	Shading Co.	Weight m ²	
		Trans.	Refl. Out	Refl. In	Trans.	Refl.						
Viridian VFloat™												
Clear	3	89	8	8	83	8	69	5.9	0.85	0.98	7.5	
	4	89	8	8	82	8	67	5.9	0.85	0.98	10	
	5	88	8	8	79	7	63	5.9	0.83	0.95	12.5	
	6	88	8	8	78	7	60	5.8	0.82	0.95	15	
	8	86	8	8	71	7	56	5.7	0.77	0.89	20	
	10	85	8	8	67	7	52	5.7	0.75	0.86	25	
	12	84	8	8	64	7	48	5.6	0.72	0.84	30	
	15	82	7	7	59	6	45	5.5	0.70	0.81	37.5	
Grey	19	80	7	7	55	6	41	5.4	0.67	0.78	47.5	
	4	56	6	6	55	6	30	5.9	0.66	0.77	10	
	5	47	6	6	47	5	23	5.8	0.61	0.71	12.5	
	6	42	5	5	42	5	19	5.8	0.58	0.67	15	
Green	10	27	5	5	31	5	12	5.7	0.51	0.59	25	
	12	21	4	4	25	5	9	5.6	0.47	0.55	30	
	4	82	8	8	58	6	36	5.9	0.68	0.79	10	
	5	79	7	7	51	6	32	5.9	0.63	0.74	12.5	
Bronze	6	77	7	7	47	5	27	5.8	0.61	0.71	15	
	10	63	6	6	29	5	11	5.7	0.49	0.57	25	
	4	61	7	7	60	6	28	5.9	0.70	0.81	10	
	5	54	6	6	52	6	22	5.9	0.64	0.74	12.5	
Viridian ComfortPlus™	6	49	6	6	48	5	19	5.8	0.62	0.71	15	
	10	34	5	5	36	5	9	5.7	0.54	0.63	25	
	Neutral 59 (#4)	6.38	59	7	9	42	7	<1	3.6	0.51	0.60	15.4
	Grey 40 (#4)	6.38	39	6	9	40	7	<1	3.6	0.50	0.58	15.4
Green 71 (#4)	6.38	71	9	11	41	7	<1	3.6	0.50	0.59	15.4	
Clear 82 (#4)	6.38	82	10	11	64	9	<1	3.6	0.68	0.79	15.4	
Clear 82 (#4)	8.38	80	11	11	60	9	<1	3.6	0.66	0.76	20.4	
Clear 82 (#4)	10.38	79	11	11	58	9	<1	3.6	0.64	0.74	25.4	
Clear 82 (#4)	12.38	79	10	11	55	8	<1	3.5	0.62	0.72	30.4	
Neutral 59 (#4)	8.38	60	8	10	41	7	<1	3.6	0.50	0.58	20.4	
Grey 37 (#4)	8.38	37	6	9	27	6	<1	3.6	0.39	0.46	20.4	
SuperGreen 49 (#4)	8.38	49	7	9	23	5	<1	3.6	0.36	0.43	20.4	
SuperBlue 44 (#4)	10.38	35	6	9	18	5	<1	3.6	0.33	0.38	25.4	
Viridian ComfortPlus™ Translucent												
Translucent (#4)	6.38	62	8	10	48	7	<1	3.6	0.56	0.65	15.4	
Translucent (#4)	10.38	60	8	10	44	7	<1	3.6	0.53	0.62	15.4	
Viridian VLam™												
Clear	6.38	87	8	8	72	7	<1	5.7	0.78	0.90	15.4	
	6.76	86	8	8	71	7	<1	5.7	0.78	0.90	15.8	
	7.52	87	8	8	69	7	<1	5.6	0.76	0.88	16.6	
Grey	6.38	42	5	5	47	6	<1	5.7	0.61	0.71	15.4	
Bronze	6.38	52	6	6	51	6	<1	5.7	0.64	0.74	15.4	
Green	6.38	71	7	7	63	6	<1	5.7	0.72	0.83	15.4	
Cool Blue	6.38	72	7	7	63	6	<1	5.7	0.72	0.83	15.4	
Translucent	6.38	66	7	7	56	6	<1	5.7	0.67	0.78	15.4	
Soft White	6.38	79	8	8	63	6	<1	5.7	0.72	0.83	15.4	
SuperGreen	6.38	65	7	7	30	5	<1	5.7	0.50	0.58	15.4	
Viridian VFloat SuperClear™												
VFloat SuperClear	4	92	8	8	91	8	86	5.8	0.90	1.04	10	
	6	91	8	8	89	8	84	5.8	0.90	1.03	15	
	10	90	8	8	87	8	81	5.7	0.89	1.02	25	
	12	90	8	8	86	8	79	5.6	0.88	1.01	30	
	15	90	8	8	85	7	77	5.4	0.87	1.00	37.5	
Viridian High Performance Tones												
SuperGreen	3	77	7	7	49	6	28	5.9	0.62	0.72	7.5	
	4	73	7	7	42	5	22	5.9	0.58	0.67	10	
	5	70	7	7	38	5	18	5.8	0.55	0.64	12.5	
	6	67	6	6	34	5	13	5.8	0.52	0.61	15	
SuperGrey	6	9	4	4	8	4	1	5.8	0.35	0.41	15	
SuperBlue	6	53	6	6	33	5	20	5.8	0.52	0.60	15	
	10	41	5	5	22	5	13	5.7	0.44	0.52	25	
Viridian EnviroShield™ Reflective												
TS21 on Clear (#2)	6	20	22	34	14	21	7	4.9	0.30	0.36	15	
TS30 on Clear (#2)	6	29	17	30	21	16	12	5.3	0.38	0.44	15	
SS22 on Clear (#2)	6	20	24	34	16	20	11	5.0	0.32	0.38	15	
SS22 on Clear (#2)	6.38	25	26	21	19	25	<1	5.8	0.36	0.42	15.4	
TS30 on Clear (#2)	6.38	33	19	18	23	20	<1	5.8	0.41	0.47	15.4	
TS21 on Clear (#2)	6.38	24	23	22	16	26	<1	5.8	0.33	0.39	15.4	

Viridian single glazing

Product Name	Nominal Thickness	Visible			Solar		UV Trans	U Value	SHGC	Shading Co.	Weight m ²
		Trans.	Refl. Out	Refl. In	Trans.	Refl.					
Viridian EVantage™											
Grey (#2)	6	32	10	27	29	8	10	3.8	0.41	0.48	15
Bronze (#2)	6	38	11	27	35	10	11	3.8	0.45	0.53	15
BlueGreen (#2)	6	56	19	27	35	11	16	3.8	0.45	0.53	15
Clear (#2)	6	68	23	26	59	17	30	3.8	0.63	0.73	15
SuperGreen (#2)	6	49	16	27	24	9	8	3.8	0.37	0.43	15
SuperBlue (#2)	6	39	12	27	23	8	10	3.8	0.36	0.43	15
Viridian EnergyTech™											
EnergyTech (#2)	3	83	11	11	71	11	58	3.7	0.73	0.85	7.5
	4	83	11	11	68	11	54	3.7	0.72	0.83	10
	5	82	11	12	67	11	52	3.7	0.70	0.81	12.5
	6	81	11	12	65	10	48	3.6	0.69	0.80	15
	10	79	11	12	60	9	43	3.6	0.65	0.76	25
EnergyTech Green (#2)	6	71	9	10	39	7	23	3.7	0.49	0.57	15
EnergyTech SuperGreen (#2)	6	61	8	10	28	6	12	3.7	0.40	0.47	15
Viridian SolTech™											
SolTech (#2)	3	62	8	10	47	8	47	3.7	0.55	0.64	7.5
	4	61	8	10	46	8	44	3.7	0.53	0.62	10
	6	63	9	10	45	8	41	3.7	0.53	0.62	15
SolTech Grey (#2)	6	30	5	8	23	6	13	3.7	0.36	0.42	15
Enviroshield™ Performance											
ITO Clear 74 (#4)	8.76	76	10	11	45	7	<1	3.6	0.54	0.63	20.8
ITO Green 67 (#4)	8.76	69	9	10	34	6	<1	3.6	0.45	0.53	20.8
ITO Neutral 54 (#4)	8.76	56	8	10	32	6	<1	3.6	0.44	0.51	20.8
ITO Grey 33 (#4)	8.76	35	6	9	21	5	<1	3.6	0.35	0.41	20.8
ITO SuperGreen 45 (#4)	8.76	46	7	9	19	5	<1	3.6	0.34	0.40	20.8
ITO SuperBlue 40 (#4)	12.76	34	6	8	15	5	<1	3.6	0.31	0.36	30.8
XIR Clear 71	6.76	73	7	7	39	23	<1	5.7	0.50	0.58	15.8
XIR Clear 70	12.76	71	7	7	37	21	<1	5.5	0.50	0.58	30.8
XIR EnergyTech 62 (#4)	12.76	65	9	10	32	21	<1	3.5	0.41	0.48	30.8
XIR Sunergy 54 (#4)	12.76	54	8	10	27	21	<1	3.9	0.38	0.45	30.8
Renew™ Laminates											
Clear (#1)	6.38	79	18	17	69	14	<1	5.8	0.74	0.85	15.4
Grey (#1)	6.38	38	15	7	45	12	<1	5.7	0.58	0.67	15.4
Bronze (#1)	6.38	48	13	8	48	11	<1	5.7	0.60	0.70	15.4
Green (#1)	6.38	64	17	9	60	13	<1	5.8	0.68	0.78	15.4
SuperGreen (#1)	7.38	64	17	13	35	12	<1	5.7	0.51	0.59	17.9
OptiView™ Laminate											
OptiView	6.38	92	1.7	1.7	70	3	<1	4.6	0.77	0.89	15.4
	12.38	90	1.6	1.6	63	3	<1	4.4	0.72	0.83	30.4
Sunergy™											
Clear (#2)	4	69	9	10	54	10	49	4.2	0.61	0.70	10
Clear (#2)	6	68	9	10	52	9	46	4.1	0.59	0.69	15
Clear (#2)	8	67	9	10	50	9	43	4.1	0.58	0.68	20
Green (#2)	6	56	7	9	28	6	16	4.1	0.42	0.49	15
Sunergy™ Laminate											
Clear (#4)	6.38	67	9	10	48	8	<1	4.1	0.57	0.66	15.4
Light Green (#4)	6.38	55	7	10	42	8	<1	4.1	0.52	0.61	15.4
Grey (#4)	6.38	33	6	9	30	6	<1	4.1	0.44	0.51	15.4
Bronze (#4)	6.38	39	6	9	32	6	<1	4.1	0.45	0.53	15.4
Blue (#4)	6.38	55	7	10	41	8	<1	4.1	0.52	0.60	15.4
Clear (#4)	8.38	67	9	10	47	8	<1	4.1	0.57	0.66	20.4
Clear (#4)	10.38	66	9	10	46	8	<1	4.0	0.55	0.64	25.4
Green (#4)	10.38	54	7	9	26	6	<1	4.0	0.41	0.47	25.4

Typical measured values of Viridian production are provided. All performance data is determined— using LBL Windows 5.2 software, NFRC 100-2001 conditions have been used. Product Name – Where # appears, ie (#2), this identifies the position of the coated surface of the glass. Glass surfaces are counted from the exterior to the interior of the building. Nominal Thickness – The glass thickness or the makeup of a Viridian ThermoTech™ unit. The first number is the outer glass thickness, +12 Air is the width of the airspace, then the thickness of the inner panel of the unit. Thickness tolerances are: 3-6mm (±0.2mm); 8-12mm (±0.3mm); 15mm (±0.5mm); 19mm (±1.0mm). Visible Light Transmission – Percentage of visible light passing directly through the glass. The wave length range for visible light is 380 to 780nm. The higher the percentage the more daylight. Visible Light Reflection – Percentage of visible light reflected toward the exterior. Solar Transmission – Percentage of normally incident visible light and solar energy passing directly through the glazing. The wave lengths measured for solar energy is 300 to 2500nm. Solar Reflection – Percentage of normally incident visible light and solar energy reflected toward the exterior. UV Transmission – The percentage of UV light transmitted measured in the light range of 300-380nm. The lower the number the better. U Value – Measurement unit is watts per m² per degree celsius (W/m²°C) and is a measure of the rate of heat gain or loss through glazing due to environmental differences between outdoor and indoor air. Shading Coefficient – The ratio of solar heat gain through the glass relative to that through 3mm clear glass. The lower the number the better the performance. SHGC (Solar Heat Gain Coefficient) – The proportion of total solar radiation that is transferred through the glass at normal incidence, it comprises the direct solar transmission (5) and the part of the solar absorption dissipated inwards by radiation and convection. The lower the number the better the solar performance.

Viridian Thermotech™ insulating glass units

Product Name	Nominal Thickness	Visible			Solar		UV Trans.	U Value		SHGC	Shading Co.	Weight m ²
		Trans.	Refl. Out	Refl. In	Trans.	Refl.		Air	Argon			
Viridian VFloat™												
Clear	3+12+3	81	15	15	69	13	53	2.7	2.6	0.75	0.87	15
	4+12+4	80	15	15	69	13	51	2.7	2.6	0.75	0.86	20
	5+12+5	79	15	15	63	12	47	2.7	2.5	0.72	0.83	25
	6+12+6	78	15	15	62	12	44	2.7	2.5	0.71	0.82	30
	8+12+6	77	14	14	57	11	42	2.7	2.5	0.66	0.76	35
	10+12+6	76	14	14	54	10	39	2.7	2.5	0.64	0.73	40
Grey	12+12+6	75	14	14	51	10	37	2.6	2.5	0.61	0.71	45
	4+12+4	50	8	13	46	8	24	2.7	2.6	0.55	0.64	20
	5+12+5	42	7	12	38	7	19	2.7	2.5	0.49	0.57	25
	6+12+6	37	7	12	33	7	15	2.7	2.5	0.45	0.52	30
Green	10+12+6	24	5	12	24	5	9	2.7	2.5	0.38	0.44	40
	12+12+6	19	5	12	20	5	7	2.6	2.5	0.34	0.40	45
	4+12+4	73	13	14	49	9	30	2.7	2.5	0.57	0.66	20
	5+12+5	70	13	14	42	9	25	2.7	2.5	0.52	0.60	25
Bronze	6+12+6	68	12	13	39	8	21	2.7	2.5	0.50	0.57	30
	10+12+6	56	9	13	24	6	9	2.6	2.5	0.37	0.43	40
	4+12+4	55	10	13	50	9	23	2.7	2.5	0.59	0.68	20
	5+12+5	48	8	13	41	7	18	2.7	2.5	0.52	0.61	25
Bronze	6+12+6	43	8	12	38	7	15	2.7	2.5	0.50	0.57	30
	10+12+6	30	6	12	28	6	7	2.6	2.5	0.41	0.48	40
Viridian VLam™												
Clear	6.38+12+6	78	15	15	58	12	<1	2.7	2.5	0.67	0.77	30.4
Grey	6.38+12+6	37	7	12	37	7	<1	2.7	2.5	0.49	0.56	30.4
Bronze	6.38+12+6	46	8	13	40	8	<1	2.7	2.5	0.52	0.60	30.4
Green	6.38+12+6	63	11	14	50	9	<1	2.7	2.5	0.60	0.70	30.4
Cool Blue	6.38+12+6	64	11	14	50	9	<1	2.7	2.5	0.60	0.69	30.4
Translucent	6.38+12+6	58	10	13	44	8	<1	2.7	2.5	0.55	0.64	30.4
Soft White	6.38+12+6	70	13	14	50	10	<1	2.7	2.5	0.61	0.70	30.4
SuperGreen	6.38+12+6	57	10	13	26	7	<1	2.7	2.5	0.38	0.44	30.4
Viridian High Performance Tones												
SuperGreen	4+12+4	65	11	14	36	7	18	2.7	2.6	0.46	0.54	20
	5+12+5	63	11	13	32	7	15	2.7	2.5	0.43	0.50	25
	6+12+6	59	10	13	28	6	10	2.7	2.5	0.39	0.46	30
VFloat Supergrey	6+12+6	8	4	11	6	4	1	2.7	2.5	0.21	0.25	30
SuperBlue	6+12+6	47	8	13	27	6	17	2.7	2.5	0.39	0.46	30
	10+12+6	36	7	12	17	5	10	2.6	2.5	0.31	0.36	40
Viridian EnviroShield™ Reflective												
TS21 on Clear (#2)	6+12+6	18	23	35	11	21	6	2.4	2.2	0.22	0.25	30
TS30 on Clear (#2)	6+12+6	27	18	33	17	17	9	2.5	2.3	0.28	0.33	30
SS22 on Clear (#2)	6+12+6	18	24	35	13	20	8	2.4	2.2	0.23	0.27	30
SS08 on Clear (#2)	6+12+6	7	42	37	5	34	3	2.3	2.1	0.14	0.16	30
SS21 on Clear (#2)	6.38+12+6	21	24	26	13	26	<1	2.7	2.5	0.23	0.27	30.4
TS30 on Clear (#2)	6.38+12+6	31	18	22	20	19	<1	2.7	2.5	0.32	0.37	30.4
SS22 on Clear (#2)	6.38+12+6	20	26	23	14	27	<1	2.7	2.5	0.25	0.29	30.4
Viridian EVantage™												
Grey (#2)	6+12+6	29	10	30	24	9	8	2.0	1.7	0.33	0.39	30
Bronze (#2)	6+12+6	34	13	29	28	11	9	2.0	1.7	0.38	0.44	30
BlueGreen (#2)	6+12+6	51	21	30	29	12	13	2.0	1.7	0.38	0.44	30
Clear (#2)	6+12+6	61	27	29	47	20	23	2.0	1.7	0.56	0.64	30
SuperGreen (#2)	6+12+6	44	18	30	21	9	7	2.0	1.7	0.30	0.34	30
SuperBlue (#2)	6+12+6	35	13	30	19	9	8	1.9	1.7	0.29	0.33	30
Viridian EnergyTech™												
EnergyTech (#2)	4+12+4	75	17	18	57	15	41	1.9	1.6	0.64	0.74	20
	6+12+6	73	16	17	52	14	36	1.9	1.6	0.61	0.71	40
	10+12+6	71	16	17	48	12	32	1.9	1.6	0.58	0.66	30
EnergyTech Green (#2)	6+12+6	63	13	16	33	9	19	1.9	1.6	0.41	0.48	15
EnergyTech SuperGreen (#2)	6+12+6	54	11	16	24	7	10	1.9	1.6	0.32	0.37	15
Viridian SolTech™												
SolTech (#2)	4+12+4	55	12	16	38	10	34	1.9	1.6	0.46	0.53	20
	6+12+6	56	12	16	36	10	30	1.9	1.6	0.45	0.52	30
SolTech Grey (#2)	6+12+6	27	6	12	19	6	10	1.9	1.6	0.28	0.33	30

Viridian Thermotech™ insulating glass units

Product Name	Nominal Thickness	Visible			Solar		UV Trans.	U Value		SHGC	Shading Co.	Weight m ²
		Trans.	Refl. Out	Refl. In	Trans.	Refl.		Air	Argon			
Viridian ComfortPlus™												
Clear 82 (#4)	8.38+12+6	72	16	17	49	12	<1	1.9	1.6	0.58	0.67	35.4
Clear 82 (#4)	10.38+12+6	71	16	17	47	12	<1	1.8	1.6	0.56	0.64	40.4
Clear 82 (#4)	12.38+12+6	70	16	17	45	11	<1	1.8	1.6	0.54	0.62	45.4
Neutral 59 (#4)	8.38+12+6	53	11	16	33	9	<1	1.9	1.6	0.42	0.49	35.4
Grey 37 (#4)	8.38+12+6	33	7	15	22	6	<1	1.9	1.6	0.31	0.36	35.4
SuperGreen 49 (#4)	8.38+12+6	44	9	15	20	6	<1	1.9	1.6	0.29	0.33	35.4
SuperBlue 44 (#4)	10.38+12+6	31	7	15	15	5	<1	1.9	1.6	0.25	0.29	40.4
Viridian EnviroShield™ Performance												
ITO Clear 74 (#4)	8.76+12+6	67	15	17	37	9	<1	1.9	1.6	0.46	0.53	35.8
ITO Green 67 (#4)	8.76+12+6	61	13	16	29	8	<1	1.9	1.6	0.38	0.43	35.8
ITO Neutral 54 (#4)	8.76+12+6	50	10	16	26	7	<1	1.9	1.6	0.36	0.41	35.8
ITO Grey 33 (#4)	8.76+12+6	31	7	15	17	5	<1	1.9	1.6	0.27	0.31	35.8
ITO SuperGreen 45 (#4)	8.76+12+6	41	8	15	17	5	<1	1.9	1.6	0.26	0.30	35.8
ITO SuperBlue 40 (#4)	12.76+12+6	30	7	15	13	5	<1	1.9	1.6	0.23	0.27	45.8
Viridian Renew™ Laminates												
Clear (#1)	6.38+12+6	70	23	22	55	17	<1	2.7	2.5	0.63	0.73	30.4
Grey (#1)	6.38+12+6	33	17	14	35	14	<1	2.7	2.5	0.46	0.54	30.4
Bronze (#1)	6.38+12+6	43	15	14	37	12	<1	2.7	2.5	0.49	0.56	30.4
Green (#1)	6.38+12+6	57	20	19	47	16	<1	2.7	2.5	0.57	0.66	30.4
SuperGreen (#1)	7.38+12+6	57	20	18	29	13	<1	2.7	2.5	0.40	0.47	32.9
Sunergy™												
Clear (#2)	4+12+4	62	13	16	45	12	38	2.1	1.9	0.53	0.61	20
Clear (#2)	6+12+6	60	12	16	41	12	34	2.1	1.9	0.51	0.58	30
Clear (#2)	8+12+6	60	12	16	40	11	32	2.1	1.9	0.50	0.57	35
Clear (#2)	10+12+6	59	12	16	39	11	31	2.1	1.9	0.49	0.56	40
Green (#2)	6+12+6	50	10	16	24	7	13	2.1	1.9	0.33	0.38	30

Notes – Viridian VFloat Clear float has been used as the backing (inside) glass of the IGU. Typical measured values of Viridian production are provided. All performance data is determined using LBL Windows 5.2 software, NFRC 100-2001 conditions have been used. Product Name – Where # appears, ie (#2), this identifies the position of the coated surface of the glass. Glass surfaces are counted from the exterior to the interior of the building. Nominal Thickness – The glass thickness or the makeup of a Viridian Thermotech™ unit. The first number is the outer glass thickness, +12 is the width of the gap, then the thickness of the inner panel of the unit. Thickness tolerances are: 3-6mm (±0.2mm); 8-12mm (±0.3mm); 15mm (±0.5mm); 19mm (±1.0mm). Visible Light Transmission – Percentage of visible light passing directly through the glass. The wave length range for visible light is 380 to 780nm. The higher the percentage the more daylight. Visible Light Reflection – Percentage of visible light reflected toward the exterior. Solar Transmission – Percentage of normally incident visible light and solar energy passing directly through the glazing. The wave lengths measured for solar energy is 300 to 2500nm. Solar Reflection – Percentage of normally incident visible light and solar energy reflected toward the exterior. UV Transmission – The percentage of UV light transmitted measured in the light range of 300-380nm. The lower the number the better. U Value – Measurement unit is watts per m² per degree celsius (W/m²°C) and is a measure of the rate of heat gain or loss through glazing due to environmental differences between outdoor and indoor air. Shading Coefficient – The ratio of solar heat gain through the glass relative to that through 3mm clear glass. The lower the number the better the performance. SHGC (Solar Heat Gain Coefficient) – The proportion of total solar radiation that is transferred through the glass at normal incidence, it comprises the direct solar transmission (5) and the part of the solar absorption dissipated inwards by radiation and convection. The lower the number the better the solar performance.

Viridian PerformaTech E™ insulating glass units

Nominal Thickness	Outside Glass	Inside Glass	Visible			Solar		UV Trans.	U Value		SHGC	Shading Co.	Weight m ²
			Trans.	Ref. Out	Ref. In	Trans.	Ref.		Air	Argon			
6+12+6	PerformaTech E (#2)	VFloat Clear	58	15	17	26	30	28	1.6	1.3	0.32	0.36	30
6+12+6	PerformaTech E (#2)	EnergyTech (#3)	54	17	18	24	31	23	1.6	1.3	0.31	0.35	30
6+12+6	PerformaTech E (#2)	SolTech (#3)	42	16	13	19	30	20	1.6	1.3	0.30	0.34	30
6+12+6	VFloat Clear	PerformaTech E (#3)	59	17	15	27	40	31	1.6	1.3	0.43	0.49	30
6+12+6	SolTech (#2)	PerformaTech E (#3)	42	13	16	19	16	20	1.6	1.3	0.32	0.37	30
6+12+6	VFloat Grey	PerformaTech E (#3)	27	7	14	13	14	10	1.6	1.3	0.26	0.29	30
6+12+6	VFloat Green	PerformaTech E (#3)	51	13	15	20	13	14	1.6	1.3	0.33	0.39	30
6+12+6	SuperBlue	PerformaTech E (#3)	35	8	14	15	8	11	1.6	1.3	0.26	0.30	30
6+12+6	SuperGreen	PerformaTech E (#3)	44	11	14	16	8	7	1.6	1.3	0.28	0.32	30
6+12+6	SuperGrey	PerformaTech E (#3)	6	4	13	3	4	1	1.6	1.3	0.12	0.13	30

PerformaTech E performance varies significantly with the surface on which PerformaTech E is glazed. Typically in clear glazing applications, the coating will be put on surface #2, however when combined with low SHGC glass, for example VFloat Grey, it may be preferable to glaze to surface #3. **NOTE PerformaTech E will have different colour appearance depending on whether the coating is glazed to surface #2 or #3. Please consult with your Viridian representative for advice specific to your application or project.**

Typical measured values of Viridian production are provided. All performance data is determined using LBL Windows 5.2 software, NFRC 100-2001 conditions have been used. Outside glass – Outside glass of IGU, where # appears, ie (#2), this identifies the position of the coated surface of the glass. Glass surfaces are counted from the exterior to the interior of the building. Inside glass – Inside glass of IGU, where # appears, ie (#3), this identifies the position of the coated surface of the glass. Glass surfaces are counted from the exterior to the interior of the building. Nominal Thickness – The glass thickness or the makeup of a Viridian ThermoTech™ unit. The first number is the outer glass thickness, +12 is the width of the gap, then the thickness of the inner panel of the unit. Thickness tolerances are: 3-6mm (±0.2mm); 8-12mm (±0.3mm); 15mm (±0.5mm); 19mm (±1.0mm). Visible Light Transmission – Percentage of visible light passing directly through the glass. The wave length range for visible light is 380 to 780nm. The higher the percentage the more daylight. Visible Light Reflection – Percentage of visible light reflected toward the exterior. Solar Transmission – Percentage of normally incident visible light and solar energy passing directly through the glazing. The wave lengths measured for solar energy is 300 to 2500nm. Solar Reflection – Percentage of normally incident visible light and solar energy reflected toward the exterior. UV Transmission – The percentage of UV light transmitted measured in the light range of 300-380nm. The lower the number the better. U Value – Measurement unit is watts per m² per degree celsius (W/m²°C) and is a measure of the rate of heat gain or loss through glazing due to environmental differences between outdoor and indoor air. Shading Coefficient – The ratio of solar heat gain through the glass relative to that through 3mm clear glass. The lower the number the better the performance. SHGC (Solar Heat Gain Coefficient) – The proportion of total solar radiation that is transferred through the glass at normal incidence, it comprises the direct solar transmission (5) and the part of the solar absorption dissipated inwards by radiation and convection. The lower the number the better the solar performance.

Viridian Thermotech™ insulating glass units with Low E

Glass Product	Nominal Thickness	Visible			Solar		UV Trans.	U Value		SHGC	Shading Co.	Weight m ²
		Trans.	Refl. Out	Refl. In	Trans.	Refl.		Air	Argon			
Viridian VFloat™												
Clear	3+12+4	75	18	17	58	16	42	1.9	1.6	0.70	0.81	17.5
	4+12+4	74	18	17	57	16	41	1.9	1.6	0.70	0.81	20
	5+12+4	74	17	17	55	15	40	1.9	1.6	0.68	0.78	22.5
	6+12+6	73	17	16	52	15	35	1.9	1.6	0.67	0.77	30
	8+12+6	71	17	16	48	13	34	1.9	1.6	0.62	0.71	35
	10+12+6	70	17	16	46	13	32	1.9	1.6	0.59	0.68	40
Grey	12+12+6	69	16	16	44	12	30	1.9	1.6	0.57	0.65	45
	4+12+4	46	9	15	38	10	20	1.9	1.6	0.50	0.57	20
	5+12+4	39	8	14	32	9	16	1.9	1.6	0.44	0.51	22.5
	6+12+6	34	7	14	27	8	12	1.9	1.6	0.40	0.46	30
	10+12+6	22	5	14	20	6	7	1.9	1.6	0.32	0.37	40
Green	12+12+6	17	5	14	16	6	6	1.8	1.6	0.28	0.33	45
	4+12+4	68	15	16	41	11	24	1.9	1.6	0.52	0.60	20
	5+12+4	66	15	16	37	10	21	1.9	1.6	0.47	0.54	22.5
	6+12+6	63	14	15	33	9	17	1.9	1.6	0.45	0.51	30
Bronze	10+12+6	52	11	15	21	7	7	1.9	1.6	0.32	0.36	40
	4+12+4	51	11	15	41	11	19	1.9	1.6	0.54	0.62	20
	5+12+4	45	9	15	35	9	15	1.9	1.6	0.47	0.55	22.5
	6+12+6	40	8	15	31	9	12	1.9	1.6	0.44	0.51	30
10+12+6	28	6	14	19	7	6	1.9	1.6	0.36	0.42	40	
Viridian VLam™												
Clear	6.38+12+6	72	17	16	50	13	<1	1.9	1.6	0.63	0.73	30.4
Grey	6.38+12+6	34	7	14	30	8	<1	1.9	1.6	0.44	0.51	30.4
Bronze	6.38+12+6	43	9	15	34	9	<1	1.9	1.6	0.47	0.55	30.4
Green	6.38+12+6	59	13	16	42	11	<1	1.9	1.6	0.56	0.65	30.4
Cool Blue	6.38+12+6	59	13	16	42	11	<1	1.9	1.6	0.56	0.64	30.4
Translucent	6.38+12+6	55	12	15	38	10	<1	1.9	1.6	0.51	0.59	30.4
Soft White	6.38+12+6	65	15	16	43	11	<1	1.9	1.6	0.57	0.65	30.4
SuperGreen	6.38+12+6	53	12	15	22	7	<1	1.9	1.6	0.32	0.38	30.4
Viridian High Performance Tones												
SuperGreen	4+12+4	61	13	15	31	8	15	1.9	1.6	0.41	0.47	20
	5+12+4	59	12	15	28	8	12	1.9	1.6	0.38	0.44	22.5
	6+12+6	55	12	15	24	7	8	1.9	1.6	0.35	0.40	30
VFloat Supergrey	6+12+6	7	4	13	5	4	1	1.9	1.6	0.15	0.18	30
SuperBlue	6+12+6	43	9	15	23	7	13	1.9	1.6	0.34	0.39	30
	10+12+6	34	7	14	16	6	8	1.9	1.6	0.26	0.30	40
Viridian EnviroShield™ Reflective												
TS21 on Clear (#2)	6+12+6	17	23	34	10	21	5	1.9	1.6	0.19	0.22	30
TS30 on Clear (#2)	6+12+6	25	18	31	15	17	7	1.9	1.6	0.25	0.29	30
SS22 on Clear (#2)	6+12+6	17	24	33	11	20	7	1.9	1.6	0.20	0.24	30
TS21 on Clear (#2)	6.38+12+6	20	24	25	12	26	<1	1.9	1.6	0.20	0.23	30.4
TS30 on Clear (#2)	6.38+12+6	29	18	24	18	20	<1	1.9	1.6	0.28	0.32	30.4
SS22 on Clear (#2)	6.38+12+6	19	27	25	12	27	<1	1.9	1.6	0.21	0.25	30.4
Viridian EVantage™												
Grey (#2)	6+12+6	27	11	29	20	9	7	1.8	1.5	0.31	0.36	30
Bronze (#2)	6+12+6	32	13	29	24	11	7	1.8	1.5	0.35	0.41	30
BlueGreen (#2)	6+12+6	47	22	28	26	13	10	1.8	1.5	0.36	0.41	30
Clear (#2)	6+12+6	57	29	28	41	21	19	1.8	1.5	0.53	0.61	30
SuperGreen (#2)	6+12+6	41	19	29	18	10	5	1.8	1.5	0.27	0.32	30
SuperBlue (#2)	6+12+6	33	14	29	17	9	7	1.8	1.5	0.27	0.31	30

Viridian Thermotech™ insulating glass units with Low E

Glass Product	Nominal Thickness	Visible			Solar		UV Trans.	U Value		SHGC	Shading Co.	Weight m ²
		Trans.	Refl. Out	Refl. In	Trans.	Refl.		Air	Argon			
Viridian EnergyTech™												
EnergyTech (#2)	4+12+4	69	19	19	51	16	34	1.8	1.5	0.61	0.71	20
	6+12+6	67	19	19	47	15	29	1.8	1.5	0.59	0.68	30
	10+12+6	65	18	19	43	13	26	1.7	1.5	0.55	0.63	40
EnergyTech Green (#2)	6+12+6	59	15	18	29	9	15	1.8	1.5	0.39	0.45	15
EnergyTech SuperGreen (#2)	6+12+6	50	13	18	22	8	8	1.8	1.5	0.31	0.35	15
Viridian SolTech™												
SolTech (#2)	4+12+4	51	13	18	34	11	28	1.8	1.5	0.44	0.51	20
	6+12+6	52	13	17	32	11	24	1.7	1.5	0.43	0.50	30
SolTech Grey (#2)	6+12+6	25	6	16	17	7	8	1.8	1.5	0.27	0.31	15
Viridian ComfortPlus™												
Clear 82 (#4)	8.38+12+6	67	18	18	43	13	<1	1.7	1.5	0.55	0.64	35.4
Clear 82 (#4)	10.38+12+6	66	18	18	42	13	<1	1.7	1.5	0.54	0.60	40.4
Clear 82 (#4)	12.38+12+6	65	18	18	40	12	<1	1.7	1.5	0.52	0.59	45.4
Neutral 59 (#4)	8.38+12+6	49	13	17	30	9	<1	1.7	1.5	0.40	0.46	35.4
Grey 37 (#4)	8.38+12+6	31	7	17	19	7	<1	1.7	1.5	0.30	0.34	35.4
SuperGreen 49 (#4)	8.38+12+6	40	10	17	18	6	<1	1.7	1.5	0.27	0.31	35.4
SuperBlue 44 (#4)	10.38+12+6	29	7	17	14	6	<1	1.7	1.5	0.23	0.27	40.4
Viridian EnviroShield™ Performance												
I/O Clear 74 (#4)	8.76+12+6	62	16	18	34	10	<1	1.7	1.5	0.44	0.51	35.8
I/O Green 67 (#4)	8.76+12+6	57	14	18	26	8	<1	1.7	1.5	0.36	0.41	35.8
I/O Neutral 54 (#4)	8.76+12+6	46	11	17	24	7	<1	1.7	1.5	0.34	0.39	35.8
I/O Grey 33 (#4)	8.76+12+6	29	7	17	16	6	<1	1.7	1.5	0.25	0.30	35.8
I/O SuperGreen 45 (#4)	8.76+12+6	38	9	17	15	6	<1	1.7	1.5	0.25	0.28	35.8
I/O SuperBlue 40 (#4)	10.76+12+6	28	7	16	12	5	<1	1.7	1.5	0.21	0.25	40.8
Viridian Renew™ Laminates												
Clear (#1)	6.38+12+6	65	25	22	47	19	<1	1.9	1.6	0.60	0.69	30.4
Grey (#1)	6.38+12+6	31	17	16	29	15	<1	1.9	1.6	0.42	0.49	30.4
Bronze (#1)	6.38+12+6	39	16	16	31	13	<1	1.9	1.6	0.45	0.51	30.4
Green (#1)	6.38+12+6	53	21	20	40	17	<1	1.9	1.6	0.53	0.62	30.4
SuperGreen (#1)	7.38+12+6	53	21	19	25	14	<1	1.9	1.6	0.36	0.41	32.9
Sunergy™												
Clear (#2)	4+12+4	57	14	18	40	13	31	1.8	1.6	0.50	0.58	20
Clear (#2)	6+12+6	56	14	18	37	13	27	1.8	1.5	0.48	0.56	30
Clear (#2)	8+12+6	55	14	18	36	12	26	1.8	1.5	0.47	0.54	35
Clear (#2)	10+12+6	55	14	18	35	11	25	1.8	1.5	0.46	0.53	40
Green (#2)	6+12+6	46	11	17	21	7	10	1.8	1.5	0.31	0.36	30

Notes – Viridian EnergyTech™ has been used as the backing (inside) glass of the IGU. Typical measured values of Viridian production are provided. All performance data is determined using LBL Windows 5.2 software, NFRC 100-2001 conditions have been used. Product Name – Where # appears, ie (#2), this identifies the position of the coated surface of the glass. Glass surfaces are counted from the exterior to the interior of the building. Nominal Thickness – The glass thickness or the makeup of a Viridian Thermotech™ unit. The first number is the outer glass thickness, +12 is the width of the gap, then the thickness of the inner panel of the unit. Thickness tolerances are: 3-6mm (±0.2mm); 8-12mm (±0.3mm); 15mm (±0.5mm); 19mm (±1.0mm). Visible Light Transmission – Percentage of visible light passing directly through the glass. The wave length range for visible light is 380 to 780nm. The higher the percentage the more daylight. Visible Light Reflection – Percentage of visible light reflected toward the exterior. Solar Transmission – Percentage of normally incident visible light and solar energy passing directly through the glazing. The wave lengths measured for solar energy is 300 to 2500nm. Solar Reflection – Percentage of normally incident visible light and solar energy reflected toward the exterior. UV Transmission – The percentage of UV light transmitted measured in the light range of 300-380nm. The lower the number the better. U Value – Measurement unit is watts per m² per degree celsius (W/m²C) and is a measure of the rate of heat gain or loss through glazing due to environmental differences between outdoor and indoor air. Shading Coefficient – The ratio of solar heat gain through the glass relative to that through 3mm clear glass. The lower the number the better the performance. SHGC (Solar Heat Gain Coefficient) – the proportion of total solar radiation that is transferred through the glass at normal incidence, it comprises the direct solar transmission (5) and the part of the solar absorption dissipated inwards by radiation and convection. The lower the number the better the solar performance.