

# UNIVERSAL SERIES™ WINDOW WALL

Boasting the best of both worlds—cost savings and uncompromising performance—Cascadia's Universal Series™ Window Wall allows architects and specifiers to substantially improve the overall thermal performance of commercial and high-rise buildings without sacrificing glazing area.

Designed and manufactured in North America, the Universal Series features an innovative, commercial-grade fiberglass frame boasting 150% improved thermal performance compared to traditional aluminum windows.

- Custom sizes & configurations
- AW Performance Class designation (casements, awnings, fixed windows)
- Low-VOC standard & custom colors meet AAMA 625 performance criteria
- Double (one Low-E) & Triple (two Low-E)
- LBC Red List Free

# CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet



## COMPONENT R-VALUES

### VISION GLASS



### OPAQUE GLASS

**SPANDREL - METAL BACKPAN (STANDARD)**  
4" INSULATION



**SPANDREL - METAL BACKPAN (PREMIUM) - 5" INSULATION**



**SLAB BYPASS - STANDARD**



# CASCADIA WINDOWS & DOORS

Universal Series™ Window Wall - Technical Data Sheet



## DOUBLE GLAZED - NFRC THERMAL PERFORMANCE SUMMARY VISION AREAS WITH 90% ARGON & 10% AIR



WINDOWS & DOORS - DOUBLE GLAZED								
LOW-E OPTIONS	CENTER-OF-GLASS DATA			U <sub>w</sub> (U-VALUE OF WINDOW) PER NFRC METHOD [BTU/HR*FT <sup>2</sup> *F]				
CARDINAL (90% ARGON FILL)	U <sub>g</sub>	SHGC	VT	FIXED	CASEMENT	AWNING	SWING DOOR	SLIDING DOOR
<b>STANDARD DOUBLE GLAZED (ONE LOW-E ON SURFACE #2 OR #3 / STAINLESS STEEL SPACER)</b>								
180 (#3)	0.26	0.64	0.77	0.26	0.25	0.25	0.24	0.24
270 (#2)	0.25	0.36	0.67	0.25	0.24	0.24	0.23	0.23
366 (#2)	0.24	0.27	0.63	0.24	0.24	0.24	0.23	0.23
340 (#2)	0.24	0.18	0.38	0.25	0.24	0.24	0.23	0.23
<b>PREMIUM DOUBLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #4 / STAINLESS STEEL SPACER)</b>								
180/i89	0.21	0.58	0.75	0.21	0.22	0.23	0.20	0.20
270/i89	0.20	0.35	0.66	0.21	0.21	0.22	0.20	0.20
366/i89	0.19	0.26	0.61	0.20	0.21	0.22	0.19	0.19
340/i89	0.20	0.17	0.37	0.21	0.21	0.22	0.20	0.20

**Note:** Triple Glazed information can be found on page 3

**Glass:** 6mm-13mm-6mm

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## TRIPLE GLAZED - NFRC THERMAL PERFORMANCE SUMMARY VISION AREAS WITH 90% ARGON & 10% AIR



WINDOWS & DOORS - TRIPLE GLAZED								
LOW-E OPTIONS	CENTER-OF-GLASS DATA			U <sub>w</sub> (U-VALUE OF WINDOW) PER NFRC METHOD [BTU/HR*FT <sup>2</sup> *F]				
CARDINAL (90% ARGON FILL)	U <sub>g</sub>	SHGC	VT	FIXED	CASEMENT	AWNING	SWING DOOR	SLIDING DOOR
<b>STANDARD TRIPLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #5 / STAINLESS STEEL SPACER)</b>								
180/180	0.13	0.52	0.67	0.15	0.17	0.17	0.15	0.15
270/180	0.13	0.32	0.58	0.14	0.17	0.17	0.15	0.15
366/180	0.12	0.24	0.54	0.14	0.17	0.17	0.15	0.15
340/180	0.13	0.15	0.33	0.14	0.17	0.17	0.15	0.15
<b>OPTIONS W/ CAPILLARY TUBES – AIR FILL (TWO LOW-E ON SURFACES #2 &amp; #5 / STAINLESS STEEL SPACER)</b>								
366/180	0.16	0.24	0.54	0.17	0.18	0.19	0.17	0.17
<b>STANDARD TRIPLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #5 / TRISEAL SUPER SPACER)</b>								
180/180	0.13	0.52	0.67	0.14	0.17	0.17	0.15	0.15
270/180	0.13	0.32	0.58	0.14	0.16	0.16	0.14	0.15
366/180	0.12	0.24	0.54	0.14	0.16	0.16	0.14	0.15
340/180	0.13	0.15	0.33	0.14	0.16	0.16	0.14	0.15
<b>PREMIUM TRIPLE GLAZED (THREE LOW-E ON SURFACES #2, #4 &amp; #6 / STAINLESS STEEL SPACER)</b>								
180/180/i89	0.11	0.49	0.65	0.13	0.16	0.16	0.14	0.14
270/180/i89	0.11	0.30	0.57	0.13	0.16	0.16	0.14	0.14
366/180/i89	0.11	0.23	0.53	0.13	0.16	0.16	0.14	0.13
340/180/i89	0.11	0.15	0.32	0.13	0.16	0.16	0.14	0.14
<b>PREMIUM TRIPLE GLAZED (THREE LOW-E ON SURFACES #2, #4 &amp; #6 / TRISEAL SUPER SPACER)</b>								
180/180/i89	0.11	0.49	0.65	0.13	0.16	0.16	0.14	0.14
270/180/i89	0.11	0.30	0.57	0.13	0.15	0.16	0.13	0.14
366/180/i89	0.11	0.23	0.53	0.13	0.15	0.15	0.13	0.14
340/180/i89	0.11	0.15	0.32	0.13	0.15	0.16	0.13	0.14

**Note:** Double Glazed information can be found on page 2

**Glass:** 6mm-13mm-6mm-13mm-6mm

# CASCADIA WINDOWS & DOORS

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## DOUBLE GLAZED - NFRC THERMAL PERFORMANCE SUMMARY VISION AREAS WITH AIR



WINDOWS & DOORS - DOUBLE GLAZED								
LOW-E OPTIONS	CENTER-OF-GLASS DATA			U <sub>w</sub> (U-VALUE OF WINDOW) PER NFRC METHOD [W / M <sup>2</sup> -K]				
CARDINAL (AIR FILL)	U <sub>g</sub>	SHGC	VT	FIXED	CASEMENT	AWNING	SWING DOOR	SLIDING DOOR
<b>STANDARD DOUBLE GLAZED (ONE LOW-E ON SURFACE #2 OR #3 / STAINLESS STEEL SPACER)</b>								
270 (#2)	0.29	0.36	0.67	0.29	0.27	0.27	0.26	0.26
366 (#2)	0.29	0.28	0.63	0.28	0.26	0.27	0.25	0.26
<b>PREMIUM DOUBLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #4 / STAINLESS STEEL SPACER)</b>								
270/i89	0.23	0.35	0.66	0.23	0.23	0.24	0.22	0.22
366/i89	0.23	0.27	0.61	0.23	0.23	0.24	0.21	0.22

**Note:** Triple Glazed with Air information can be found on page 5

**Glass:** 6mm-13mm-6mm

# CASCADIA WINDOWS & DOORS

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## TRIPLE GLAZED - NFRC THERMAL PERFORMANCE SUMMARY VISION AREAS WITH AIR



### WINDOWS & DOORS - TRIPLE GLAZED

LOW-E OPTIONS CARDINAL (AIR FILL)	CENTER-OF-GLASS DATA			U <sub>w</sub> (U-VALUE OF WINDOW) PER NFRC METHOD [W / M <sup>2</sup> -K]				
	U <sub>g</sub>	SHGC	VT	FIXED	CASEMENT	AWNING	SWING DOOR	SLIDING DOOR
<b>STANDARD TRIPLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #5 / STAINLESS STEEL SPACER)</b>								
180/180	0.16	0.51	0.67	0.17	0.19	0.19	0.17	0.17
270/180	0.16	0.32	0.58	0.17	0.19	0.19	0.17	0.17
366/180	0.16	0.24	0.54	0.17	0.18	0.19	0.17	0.17

<b>STANDARD TRIPLE GLAZED (TWO LOW-E ON SURFACES #2 &amp; #5 / TRISEAL SUPER SPACER)</b>								
180/180	0.16	0.51	0.67	0.17	0.18	0.18	0.17	0.17
270/180	0.16	0.32	0.58	0.17	0.18	0.18	0.16	0.17
366/180	0.16	0.24	0.54	0.17	0.18	0.18	0.16	0.17

<b>PREMIUM TRIPLE GLAZED (THREE LOW-E ON SURFACES #2, #4 &amp; #6 / STAINLESS STEEL SPACER)</b>								
180/180/i89	0.14	0.48	0.65	0.15	0.18	0.18	—	0.16
270/180/i89	0.14	0.30	0.57	0.15	0.17	0.18	0.15	0.15
366/180/i89	0.14	0.23	0.53	0.15	0.17	0.17	0.15	0.15

<b>TRIPLE GLAZED (THREE LOW-E ON SURFACES #2, #4 &amp; #6 / TRISEAL SUPER SPACER)</b>								
180/180/i89	0.14	0.48	0.65	0.15	0.17	0.17	—	0.16
270/180/i89	0.14	0.30	0.57	0.15	0.17	0.17	0.15	0.16
366/180/i89	0.14	0.23	0.53	0.15	0.17	0.17	0.15	0.15

**Note:** Double Glazed Air information can be found on page 4

**Glass:** 6mm-13mm-6mm-13mm-6mm

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## NAFS KEY PERFORMANCE DATA - VISION AREAS

WINDOWS							
	TYPE	TESTED SIZE [INCHES]	DESIGN WIND PRESSURE PSF (PA)	WATER INFILTRATION PSF (PA)	NAFS DESIGNATORS	AIR INFILTRATION [L/S*M2]	AIR EXFILTRATION [L/S*M2]
OUTSWING	CASEMENT	36" x 60"	60 (2880)	15 (730)	AW-PG60-C	0.01	0.06
	CASEMENT	36" x 84"	45 (2160)	15 (730)	CW-PG45-C	0.06	0.02
	AWNING	60" X 36"	60 (2880)	15 (730)	AW-PG60-AP	0.05	0.29
	AWNING	84" x 36"	60 (2880)	15 (730)	CW-PG60-AP	0.00	0.00
	AWNING	48" x 84"	55 (2640)	15 (730)	CW-PG55-AP	0.01	0.01
FIXED	FIXED	76" x 120"	60 (2880)	15 (730)	AW-PG60-FW	0.01	0.01
	FIXED	144" x 60"	100 (4800)	15 (730)	CW-PG100-FW	0.00	0.00
	FIXED	102" x 84"	95 (4320)	15 (730)	CW-PG95-FW	0.00	0.00
DOORS	OUTSWING (SINGLE)	60" x 120"	40 (1920)	15 (730)	CW-PG40-SHD	0.21	0.18
	OUTSWING (DOUBLE)	96" x 108"	20 (960)	15 (730)	R-PG20-SHD		
	INSWING (SINGLE)	60" x 120"	45 (2160)	15 (730)	R-PG45-DASHD	0.09	0.03
	INSWING (DOUBLE)	96" x 108"	35 (1680)	15 (730)	R-PG35-SHD	0.02	0.02
	SLIDING	96" x 96"	45 (2160)	15 (730)	CW-PG45-SD	0.05	0.07
	SLIDING (DOUBLE)	240" x 108"	20 (960)	15 (730)	R-PG20-SD	0.01	0.02
	SLIDING (DOUBLE)	198" x 96"	30 (1440)	15 (730)	CW-PG30-SD	0.00	0.00

**NOTE:** Dimensions above indicate NAFS performance tested sizes which may exceed common size limits available. For minimum/maximum sizes available, please consult Cascadia's Vent Size Charts.

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## ACOUSTIC PERFORMANCE

WINDOWS				
	GLAZING	SAMPLE SIZE	STC	OITC
FIXED WINDOW (ASTM E90)	Double 6/4	47.25" x 59.00"	34	28
FIXED WINDOW (ASTM E90)	Triple 6Lami/4/6	47.25" x 59.00"	37	27
TILT & TURN (ASTM E90)	Double 6/4	47.25" x 59.00"	35	28
TILT & TURN (ASTM E90)	Triple 6Lami/4/6	47.25" x 59.00"	37	28
GLASS-ONLY (CALCULATED VALUES) 1" IGU NOMINAL	Double 6/6	Center-of-glass	35	28
GLASS-ONLY (CALCULATED VALUES) 1" IGU NOMINAL	Double 6Lami/6	Center-of-glass	38	31
GLASS-ONLY (CALCULATED VALUES) 1" IGU NOMINAL	Double 6Lami/6Lami	Center-of-glass	40	34
GLASS-ONLY (CALCULATED VALUES) 1.25" IGU NOMINAL	Double 6/6	Center-of-glass	38	31
GLASS-ONLY (CALCULATED VALUES) 1.25" IGU NOMINAL	Double 6Lami/6	Center-of-glass	39	32
GLASS-ONLY (CALCULATED VALUES) 1.25" IGU NOMINAL	Double 6Lami/6Lami	Center-of-glass	41	35
GLASS-ONLY (CALCULATED VALUES) 1.70" IGU NOMINAL	Triple 6/4/6	Center-of-glass	39	31
GLASS-ONLY (CALCULATED VALUES) 1.70" IGU NOMINAL	Triple 6Lami/4/6	Center-of-glass	41	34
GLASS-ONLY (CALCULATED VALUES) 1.70" IGU NOMINAL	Triple 4/4/4	Center-of-glass	36	28

**NOTE:** Glass-only calculated values for STC and OITC represent approximate values.