



**VINYL WINDOWS:**

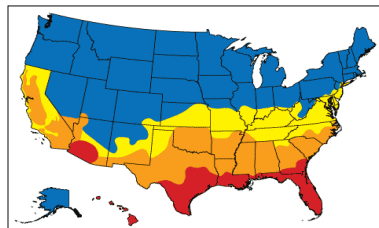
Valid January 1, 2015 thru December 31, 2015

| Product Line                          | Glazing Description                 | NO GRIDS<br>Thermal Performance |      |      | NO GRIDS<br>Energy Star®<br>Zone Compliance |     |     |      | WITH GRIDS<br>Thermal Performance |      |      | WITH GRIDS<br>Energy Star®<br>Zone Compliance |     |     |     |
|---------------------------------------|-------------------------------------|---------------------------------|------|------|---|-----|-----|------|-----------------------------------|------|------|---|-----|-----|-----|
|                                       |                                     | U                               | SHGc | VT   |   |     |     |      | U                                 | SHGc | VT   |   |     |     |     |
| Tribute Double Hung                   | Tribute DG 2X Low-E/Argon           | 0.28                            | 0.27 | 0.46 | N   | NC  | --- | ---  | 0.28                              | 0.24 | 0.41 | N   | NC  | SC  | S   |
|                                       | Tribute HP TG 2X Low-E/Krypton/FOAM | 0.19                            | 0.25 | 0.43 | N   | NC  | SC  | S    | 0.19                              | 0.22 | 0.38 | N   | NC  | SC  | S   |
| Classic Double Hung                   | Clear                               | 0.47                            | 0.59 | 0.62 | ---   | --- | --- | ---  | 0.47                              | 0.53 | 0.55 | ---   | --- | --- | --- |
|                                       | Low-E                               | 0.33                            | 0.31 | 0.55 | ---   | --- | --- | ---  | 0.33                              | 0.28 | 0.49 | ---   | --- | --- | --- |
|                                       | Low-E/Argon - ENERGY STAR® Package  | 0.30                            | 0.31 | 0.55 | N   | NC  | --- | ---  | 0.30                              | 0.28 | 0.49 | N   | NC  | --- | --- |
|                                       | Large Project Glazing Package       | 0.28                            | 0.30 | 0.55 | N   | NC  | --- | ---  | 0.28                              | 0.27 | 0.42 | N   | NC  | --- | --- |
|                                       | TG 2X Low-E/Argon                   | 0.24                            | 0.27 | 0.45 | N   | NC  | --- | ---  | 0.25                              | 0.24 | 0.40 | N   | NC  | SC  | S   |
|                                       | TG 2X Low-E/Krypton                 | 0.20                            | 0.26 | 0.45 | N   | NC  | --- | ---  | 0.21                              | 0.24 | 0.40 | N   | NC  | SC  | S   |
| Slimline Double Hung & Single Hung    | Clear                               | 0.47                            | 0.60 | 0.62 | ---   | --- | --- | ---  | 0.47                              | 0.54 | 0.56 | ---   | --- | --- | --- |
|                                       | Low-E                               | 0.34                            | 0.31 | 0.56 | ---   | --- | --- | ---  | 0.34                              | 0.28 | 0.50 | ---   | --- | --- | --- |
|                                       | Low-E/Argon - ENERGY STAR® Package  | 0.30                            | 0.31 | 0.56 | N   | NC  | --- | ---  | 0.30                              | 0.28 | 0.50 | N   | NC  | --- | --- |
| Tribute Commercial Series Double Hung | Clear                               | 0.47                            | 0.57 | 0.60 | ---   | --- | --- | ---  | 0.47                              | 0.51 | 0.53 | ---   | --- | --- | --- |
|                                       | Low-E                               | 0.34                            | 0.29 | 0.53 | ---   | --- | --- | ---  | 0.34                              | 0.26 | 0.47 | ---   | --- | --- | --- |
|                                       | Low-E/Argon - ENERGY STAR® Package  | 0.30                            | 0.28 | 0.52 | N   | NC  | --- | ---  | 0.30                              | 0.26 | 0.46 | N   | NC  | --- | --- |
|                                       | TG 2X Low-E/Argon                   | 0.25                            | 0.25 | 0.43 | N   | NC  | SC  | S    | 0.26                              | 0.22 | 0.38 | N   | NC  | SC  | S   |
|                                       | TG 2X Low-E/Krypton                 | 0.21                            | 0.25 | 0.43 | N   | NC  | SC  | S    | 0.22                              | 0.22 | 0.38 | N   | NC  | SC  | S   |
| Vinyl Casement & Fixed Lite           | Clear                               | 0.44                            | 0.52 | 0.54 | ---   | --- | --- | ---  | 0.44                              | 0.47 | 0.48 | ---   | --- | --- | --- |
|                                       | Low-E                               | 0.33                            | 0.27 | 0.48 | ---   | --- | --- | ---  | 0.33                              | 0.25 | 0.43 | ---   | --- | SC  | S   |
|                                       | Low-E/Argon - ENERGY STAR® Package  | 0.30                            | 0.27 | 0.48 | N   | NC  | --- | ---  | 0.30                              | 0.25 | 0.43 | N   | NC  | SC  | S   |
|                                       | Tribute DG 2X Low-E/Argon           | 0.29                            | 0.25 | 0.43 | N   | NC  | SC  | S    | 0.29                              | 0.23 | 0.38 | N   | NC  | SC  | S   |
|                                       | TG 2X Low-E/Argon                   | 0.27                            | 0.23 | 0.39 | N   | NC  | SC  | S    | 0.29                              | 0.21 | 0.35 | N   | NC  | SC  | S   |
|                                       | Tribute HP TG 2X Low-E/Krypton      | 0.23                            | 0.23 | 0.39 | N   | NC  | SC  | S    | 0.24                              | 0.21 | 0.35 | N   | NC  | SC  | S   |
| Vinyl Awning                          | Clear                               | 0.45                            | 0.52 | 0.54 | ---   | --- | --- | ---  | 0.45                              | 0.47 | 0.48 | ---   | --- | --- | --- |
|                                       | Low-E                               | 0.33                            | 0.27 | 0.48 | ---   | --- | --- | ---  | 0.33                              | 0.25 | 0.43 | ---   | --- | SC  | S   |
|                                       | Low-E/Argon - ENERGY STAR® Package  | 0.30                            | 0.27 | 0.48 | N   | NC  | --- | ---  | 0.30                              | 0.25 | 0.43 | N   | NC  | SC  | S   |
|                                       | Tribute DG 2X Low-E/Argon           | 0.30                            | 0.25 | 0.43 | N   | NC  | SC  | S    | 0.30                              | 0.23 | 0.38 | N   | NC  | SC  | S   |
|                                       | TG 2X Low-E/Argon                   | 0.28                            | 0.23 | 0.39 | N   | NC  | SC  | S    | 0.29                              | 0.21 | 0.35 | N   | NC  | SC  | S   |
|                                       | Tribute HP TG 2X Low-E/Krypton      | 0.23                            | 0.23 | 0.39 | N   | NC  | SC  | S    | 0.24                              | 0.21 | 0.35 | N   | NC  | SC  | S   |
| Vinyl Rolling Window                  | Clear                               | 0.46                            | 0.59 | 0.61 | ---   | --- | --- | ---  | 0.46                              | 0.52 | 0.54 | ---   | --- | --- | --- |
|                                       | Low-E                               | 0.33                            | 0.31 | 0.55 | ---   | --- | --- | ---  | 0.33                              | 0.28 | 0.48 | ---   | --- | --- | --- |
|                                       | Low-E/Argon - ENERGY STAR® Package  | 0.30                            | 0.30 | 0.55 | N   | NC  | --- | ---  | 0.30                              | 0.27 | 0.48 | N   | NC  | --- | --- |
|                                       | Tribute DG 2X Low-E/Argon           | 0.29                            | 0.28 | 0.49 | N   | NC  | --- | ---  | 0.29                              | 0.26 | 0.43 | N   | NC  | --- | --- |
|                                       | TG 2X Low-E/Argon                   | 0.24                            | 0.26 | 0.44 | N   | NC  | --- | ---  | 0.25                              | 0.24 | 0.39 | N   | NC  | SC  | S   |
| Tribute HP TG 2X Low-E/Krypton        | 0.20                                | 0.26                            | 0.44 | N    | NC  | --- | --- | 0.20 | 0.24                              | 0.39 | N    | NC  | SC  | S   |     |

**NOTES:**

U-Factor in accordance with NFRC-100 and based on whole window values. Select glass types shown - others types are available subject to special inquiry. Tempered Low-E and Bronze tint glass will affect U-Factor, SHGc and VT values. Obscure glass is treated as Clear glass and shares the same thermal data. Tempered Glass window units may not meet the ENERGY STAR® Criteria. All Patio Door Glazing options are Tempered Glass only.

Test results shown are subject to change without notice due to periodic re-testing.



**2015 ENERGY STAR® Qualification Criteria for Climate Zones**

| US Climate Zone           | U-Factor | SHGc   |
|---------------------------|----------|--------|
| N = Northern <sup>1</sup> | ≤ 0.30   | ANY    |
| N = Northern <sup>2</sup> | = 0.31   | ≥ 0.35 |
| N = Northern <sup>3</sup> | = 0.32   | ≥ 0.40 |
| NC = North-Central        | ≤ 0.30   | ≤ 0.40 |
| SC = South-Central        | ≤ 0.30   | ≤ 0.25 |
| S = Southern              | ≤ 0.40   | ≤ 0.25 |



**VINYL WINDOWS: Continued**

Valid January 1, 2015 thru December 31, 2015

| Product Line         | Glazing Description                       | NO GRIDS<br>Thermal Performance Data |      |      | NO GRIDS<br>Energy Star®<br>Zone Compliance |    |      | WITH GRIDS<br>Thermal Performance Data |      |      | WITH GRIDS<br>Energy Star®<br>Zone Compliance |    |      |
|----------------------|---|--------------------------------------|------|------|---|----|------|--|------|------|---|----|------|
|                      |   | U                                    | SHGc | VT   |   |    |      | U                                      | SHGc | VT   |   |    |      |
| Vinyl Picture Window | Clear                                     | 0.44                                 | 0.61 | 0.65 | --  | -- | --   | 0.44                                   | 0.55 | 0.58 | --  | -- | --   |
|                      | Low-E                                     | 0.31                                 | 0.31 | 0.58 | --  | NC | --   | 0.31                                   | 0.28 | 0.52 | --  | NC | --   |
|                      | Low-E/Argon - ENERGY STAR® Package        | 0.27                                 | 0.31 | 0.58 | N   | NC | --   | 0.27                                   | 0.28 | 0.52 | N   | NC | --   |
|                      | Tribute DG 2X Low-E/Argon                 | 0.26                                 | 0.29 | 0.51 | N   | NC | --   | 0.26                                   | 0.26 | 0.46 | N   | NC | --   |
|                      | TG 2X Low-E/Argon                         | 0.23                                 | 0.27 | 0.46 | N   | NC | --   | 0.23                                   | 0.24 | 0.42 | N   | NC | SC S |
|                      | Tribute HP TG 2X Low-E/Krypton            | 0.18                                 | 0.27 | 0.46 | N   | NC | --   | 0.19                                   | 0.24 | 0.41 | N   | NC | SC S |
| Vinyl Hopper         | Clear                                     | 0.46                                 | 0.55 | 0.57 | --  | -- | --   | 0.46                                   | 0.50 | 0.51 | --  | -- | --   |
|                      | Low-E                                     | 0.34                                 | 0.28 | 0.50 | --  | -- | --   | 0.34                                   | 0.25 | 0.46 | --  | -- | SC S |
|                      | Low-E/Argon                               | 0.31                                 | 0.27 | 0.50 | --  | NC | --   | 0.31                                   | 0.25 | 0.46 | --  | NC | SC S |
|                      | 2X Low-E/Argon DSB - ENERGY STAR® Package | 0.30                                 | 0.26 | 0.44 | N   | NC | --   | 0.30                                   | 0.23 | 0.40 | N   | NC | SC S |
|                      | Tribute DG 2X Low-E/Argon DSB             | 0.30                                 | 0.26 | 0.44 | N   | NC | --   | 0.30                                   | 0.23 | 0.40 | N   | NC | SC S |
|                      | TG 2X Low-E/Argon                         | 0.25                                 | 0.24 | 0.41 | N   | NC | SC S | 0.26                                   | 0.22 | 0.37 | N   | NC | SC S |
|                      | Tribute HP TG 2X Low-E/Krypton            | 0.21                                 | 0.24 | 0.41 | N   | NC | SC S | 0.22                                   | 0.22 | 0.37 | N   | NC | SC S |
| Vinyl Designer Shape | Clear                                     | 0.46                                 | 0.66 | 0.71 | --  | -- | --   | 0.46                                   | 0.60 | 0.64 | --  | -- | --   |
|                      | Low-E                                     | 0.32                                 | 0.34 | 0.63 | --  | NC | --   | 0.32                                   | 0.31 | 0.57 | --  | NC | --   |
|                      | Low-E/Argon - ENERGY STAR® Package        | 0.28                                 | 0.34 | 0.63 | N   | NC | --   | 0.28                                   | 0.31 | 0.57 | N   | NC | --   |
|                      | 2X Low-E/Argon                            | 0.27                                 | 0.32 | 0.56 | N   | NC | --   | 0.27                                   | 0.29 | 0.50 | N   | NC | --   |
|                      | Tribute DG 2X Low-E/Argon                 | 0.27                                 | 0.32 | 0.56 | N   | NC | --   | 0.27                                   | 0.29 | 0.50 | N   | NC | --   |
| Vinyl Deadlite       | Clear                                     | 0.48                                 | 0.66 | 0.70 | --  | -- | --   | 0.48                                   | 0.59 | 0.63 | --  | -- | --   |
|                      | Low-E                                     | 0.34                                 | 0.34 | 0.62 | --  | -- | --   | 0.34                                   | 0.31 | 0.56 | --  | -- | --   |
|                      | Low-E/Argon - ENERGY STAR® Package        | 0.30                                 | 0.34 | 0.62 | N   | NC | --   | 0.30                                   | 0.30 | 0.56 | N   | NC | --   |
|                      | 2X Low-E/Argon                            | 0.29                                 | 0.32 | 0.55 | N   | NC | --   | 0.29                                   | 0.29 | 0.50 | N   | NC | --   |
|                      | Tribute HP 2X Low-E/Argon                 | 0.29                                 | 0.32 | 0.55 | N   | NC | --   | 0.29                                   | 0.29 | 0.50 | N   | NC | --   |
|                      | TG 2X Low-E/Argon                         | 0.26                                 | 0.29 | 0.50 | N   | NC | --   | 0.28                                   | 0.26 | 0.45 | N   | NC | --   |
|                      | Tribute HP TG 2X Low-E/Krypton            | 0.20                                 | 0.29 | 0.50 | N   | NC | --   | 0.21                                   | 0.26 | 0.45 | N   | NC | --   |

**VINYL IMPACT RATED WINDOWS & DOORS:**

Valid January 1, 2015 thru December 31, 2015

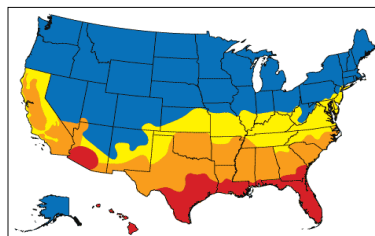
| Product Line               | Glazing Description                    | NO GRIDS<br>Thermal Performance Data |      |      | NO GRIDS<br>Energy Star®<br>Zone Compliance |    |      | WITH GRIDS<br>Thermal Performance Data |      |      | WITH GRIDS<br>Energy Star®<br>Zone Compliance |    |      |
|----------------------------|--|--------------------------------------|------|------|---|----|------|--|------|------|---|----|------|
|                            |  | U                                    | SHGc | VT   |   |    |      | U                                      | SHGc | VT   |   |    |      |
| Vigilance Double Hung      | Low-E/Argon - ENERGY STAR® Package     | 0.30                                 | 0.28 | 0.51 | N   | NC | --   | 0.30                                   | 0.25 | 0.45 | N   | NC | SC S |
| Vigilance Casement         | Low-E/Argon - ENERGY STAR® Package     | 0.29                                 | 0.27 | 0.47 | N   | NC | --   | 0.29                                   | 0.24 | 0.42 | N   | NC | SC S |
| Vigilance Awning           | Low-E/Argon - ENERGY STAR® Package     | 0.30                                 | 0.27 | 0.47 | N   | NC | --   | 0.30                                   | 0.24 | 0.42 | N   | NC | SC S |
| Vigilance Picture Window * | Low-E/Argon - ENERGY STAR® Package     | 0.27                                 | 0.35 | 0.56 | N   | NC | --   | 0.27                                   | 0.32 | 0.50 | N   | NC | --   |
| Vigilance Patio Door       | 366 Low-E/Argon - ENERGY STAR® Package | 0.27                                 | 0.17 | 0.39 | N   | NC | SC S | 0.27                                   | 0.15 | 0.34 | N   | NC | SC S |

\* Vigilance Picture Window is available as a Replacement Frame unit only.

**NOTES:**

U-Factor in accordance with NFRC-100 and based on whole window values. Select glass types shown - others types are available subject to special inquiry. Tempered Low-E and Bronze tint glass will affect U-Factor, SHGc and VT values. Obscure glass is treated as Clear glass and shares the same thermal data. Tempered Glass window units may not meet the ENERGY STAR® Criteria. All Patio Door Glazing options are Tempered Glass only.

Test results shown are subject to change without notice due to periodic re-testing.



**2015 ENERGY STAR® Qualification Criteria for Climate Zones**

| US Climate Zone           | U-Factor | SHGc   |
|---------------------------|----------|--------|
| N = Northern <sup>1</sup> | ≤ 0.30   | ANY    |
| N = Northern <sup>2</sup> | = 0.31   | ≥ 0.35 |
| N = Northern <sup>3</sup> | = 0.32   | ≥ 0.40 |
| NC = North-Central        | ≤ 0.30   | ≤ 0.40 |
| SC = South-Central        | ≤ 0.30   | ≤ 0.25 |
| S = Southern              | ≤ 0.40   | ≤ 0.25 |



**MAJESTY WOOD WINDOWS:**

Valid January 1, 2015 thru December 31, 2015

| Product Line                             | Glazing Description                        | NO GRIDS<br>Thermal Performance Data |      |      | NO GRIDS<br>Energy Star®<br>Zone Compliance |     |     | WITH GRIDS<br>Thermal Performance Data |      |      | WITH GRIDS<br>Energy Star®<br>Zone Compliance |     |     |    |
|--|--|--------------------------------------|------|------|---|-----|-----|--|------|------|---|-----|-----|----|
|  |  | U                                    | SHGc | VT   |   |     |     | U                                      | SHGc | VT   |   |     |     |    |
| Majesty Double Hung                      | 2X Low-E/Argon - ENERGY STAR® Package      | 0.30                                 | 0.26 | 0.46 | N   | NC  | --- | 0.30                                   | 0.24 | 0.41 | N   | NC  | SC  | S  |
| Majesty Picture Window                   | 2X Low-E/Argon - ENERGY STAR® Package      | 0.28                                 | 0.28 | 0.48 | N   | NC  | --- | 0.28                                   | 0.25 | 0.43 | N   | NC  | SC  | S  |
| Majesty Casement,<br>Awning & Fixed Lite | 2X Low-E/Argon                             | 0.36                                 | 0.26 | 0.45 | ---   | --- | --- | 0.36                                   | 0.24 | 0.41 | ---   | --- | --- | S  |
|  | TG 2X Low-E/Krypton - ENERGY STAR® Package | 0.27                                 | 0.24 | 0.41 | N   | NC  | SC  | S                                      | 0.28 | 0.22 | 0.37  | N   | NC  | SC |

**VINYL PATIO DOORS:**

Valid January 1, 2015 thru December 31, 2015

| Product Line   | Glazing Description                | NO GRIDS<br>Thermal Performance Data |      |      | NO GRIDS<br>Energy Star®<br>Zone Compliance |     |     | WITH GRIDS<br>Thermal Performance Data |      |      | WITH GRIDS<br>Energy Star®<br>Zone Compliance |     |     |     |   |
|--|------------------------------------|--------------------------------------|------|------|---|-----|-----|--|------|------|---|-----|-----|-----|---|
|  |                                    | U                                    | SHGc | VT   |   |     |     | U                                      | SHGc | VT   |   |     |     |     |   |
| Vinyl Patio Door<br>Stock/Standard size<br>All Glazing is Tempered<br>All Values are for 3.0mm Glass | Clear                              | 0.46                                 | 0.56 | 0.60 | ---   | --- | --- | 0.46                                   | 0.49 | 0.52 | ---   | --- | --- | --- |   |
|  | **Blinds Between Glass - Low-E     | 0.35                                 | 0.26 | 0.48 | ---   | --- | --- | N/A                                    |      |      | N/A   |     |     |     |   |
|  | Low-E                              | 0.33                                 | 0.29 | 0.53 | ---   | --- | --- | 0.33                                   | 0.25 | 0.46 | ---   | --- | --- | --- |   |
|  | Low-E/Argon - ENERGY STAR® Package | 0.30                                 | 0.29 | 0.53 | N   | NC  | --- | 0.30                                   | 0.25 | 0.46 | N   | NC  | SC  | S   |   |
|  | 2X Low-E/Argon                     | 0.30                                 | 0.27 | 0.47 | N   | NC  | --- | 0.30                                   | 0.24 | 0.41 | N   | NC  | SC  | S   |   |
|  | Tribute DG 2X Low-E/Argon          | 0.30                                 | 0.27 | 0.47 | N   | NC  | --- | 0.30                                   | 0.24 | 0.41 | N   | NC  | SC  | S   |   |
|  | TG 2X Low-E/Argon                  | 0.25                                 | 0.25 | 0.43 | N   | NC  | SC  | S                                      | 0.27 | 0.22 | 0.37  | N   | NC  | SC  | S |
| Tribute HP TG 2X Low-E/Krypton   | 0.21                               | 0.25                                 | 0.43 | N    | NC  | SC  | S   | 0.21                                   | 0.22 | 0.37 | N   | NC  | SC  | S   |   |
| Vinyl Patio Door<br>Custom Size<br>All Glazing is Tempered<br>All Values are for 3.0mm Glass         | Clear                              | 0.46                                 | 0.56 | 0.60 | ---   | --- | --- | 0.46                                   | 0.49 | 0.52 | ---   | --- | --- | --- |   |
|  | Low-E                              | 0.33                                 | 0.29 | 0.52 | ---   | --- | --- | 0.33                                   | 0.25 | 0.45 | ---   | --- | --- | --- |   |
|  | Low-E/Argon - ENERGY STAR® Package | 0.29                                 | 0.29 | 0.52 | N   | NC  | --- | 0.29                                   | 0.25 | 0.45 | N   | NC  | SC  | S   |   |
|  | 2X Low-E/Argon                     | 0.29                                 | 0.27 | 0.45 | N   | NC  | --- | 0.29                                   | 0.24 | 0.39 | N   | NC  | SC  | S   |   |
|  | Tribute DG 2X Low-E/ARG            | 0.29                                 | 0.27 | 0.45 | N   | NC  | --- | 0.29                                   | 0.24 | 0.39 | N   | NC  | SC  | S   |   |
|  | TG 2X Low-E/Argon                  | 0.25                                 | 0.25 | 0.41 | N   | NC  | SC  | S                                      | 0.26 | 0.22 | 0.35  | N   | NC  | SC  | S |
|  | Tribute HP TG 2X Low-E/Krypton     | 0.20                                 | 0.25 | 0.41 | N   | NC  | SC  | S                                      | 0.21 | 0.22 | 0.35  | N   | NC  | SC  | S |

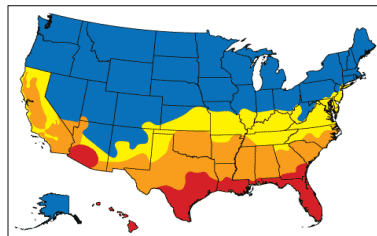
\*\* Note: Blinds Between Glass are available on Standard Size 2, 3 & 4 Lite doors that use a 3' panel width (6068, 9068 & 12068 door sizes).

Indicates Tempered Glass

**NOTES:**

U-Factor in accordance with NFRC-100 and based on whole window values. Select glass types shown - others types are available subject to special inquiry. Tempered Low-E and Bronze tint glass will affect U-Factor, SHGc and VT values. Obscure glass is treated as Clear glass and shares the same thermal data. Tempered Glass window units may not meet the ENERGY STAR® Criteria. All Patio Door Glazing options are Tempered Glass only.

Test results shown are subject to change without notice due to periodic re-testing.



| US Climate Zone    | U-Factor | SHGc   |
|--------------------|----------|--------|
| N = Northern¹      | ≤ 0.30   | ANY    |
| N = Northern²      | = 0.31   | ≥ 0.35 |
| N = Northern³      | = 0.32   | ≥ 0.40 |
| NC = North-Central | ≤ 0.30   | ≤ 0.40 |
| SC = South-Central | ≤ 0.30   | ≤ 0.25 |
| S = Southern       | ≤ 0.40   | ≤ 0.25 |



**ACOUSTICAL INSULATING WINDOWS:**

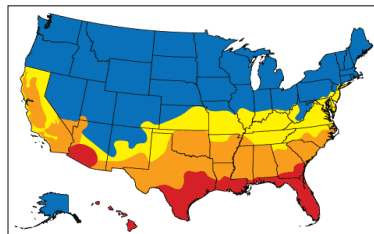
Valid January 1, 2015 thru December 31, 2015

| Product Line   | Glazing Description                  | NO GRIDS<br>Thermal Performance Data |      |      | NO GRIDS<br>Energy Star®<br>Zone Compliance |      |    |    | WITH GRIDS<br>Thermal Performance Data |      |      | WITH GRIDS<br>Energy Star®<br>Zone Compliance |    |    |    |
|--|--------------------------------------|--------------------------------------|------|------|---|------|----|----|--|------|------|---|----|----|----|
|  |                                      | U                                    | SHGc | VT   | U   | SHGc | VT | U  | SHGc                                   | VT   | U    | SHGc  | VT |    |    |
| <b>Classic Double Hung</b><br>STC = 35                     | Clear                                | 0.46                                 | 0.54 | 0.60 | --  | --   | -- | -- | 0.46                                   | 0.49 | 0.54 | --  | -- | -- | -- |
|  | Low-E                                | 0.34                                 | 0.35 | 0.54 | --  | --   | -- | -- | 0.34                                   | 0.32 | 0.48 | --  | -- | -- | -- |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.31                                 | 0.35 | 0.54 | N   | --   | -- | -- | 0.31                                   | 0.32 | 0.48 | --  | -- | -- | -- |
| <b>Slimline Double Hung &amp; Single Hung</b><br>STC = 35  | Clear                                | 0.47                                 | 0.55 | 0.61 | --  | --   | -- | -- | 0.47                                   | 0.49 | 0.54 | --  | -- | -- | -- |
|  | Low-E                                | 0.34                                 | 0.36 | 0.54 | --  | --   | -- | -- | 0.34                                   | 0.32 | 0.48 | --  | -- | -- | -- |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.31                                 | 0.36 | 0.54 | N   | --   | -- | -- | 0.31                                   | 0.32 | 0.48 | --  | -- | -- | -- |
| <b>Acoustic Double Hung</b><br>STC = 40                    | Clear                                | 0.34                                 | 0.49 | 0.53 | --  | --   | -- | -- | 0.34                                   | 0.44 | 0.47 | --  | -- | -- | -- |
|  | Low-E - ENERGY STAR® Package         | 0.26                                 | 0.28 | 0.47 | N   | NC   | -- | -- | 0.26                                   | 0.25 | 0.42 | N   | NC | SC | S  |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.25                                 | 0.28 | 0.47 | N   | NC   | -- | -- | 0.25                                   | 0.25 | 0.42 | N   | NC | SC | S  |
| <b>Acoustic Double Hung</b><br>STC = 44                    | Clear                                | 0.34                                 | 0.47 | 0.52 | --  | --   | -- | -- | 0.34                                   | 0.42 | 0.46 | --  | -- | -- | -- |
|  | Low-E - ENERGY STAR® Package         | 0.27                                 | 0.29 | 0.46 | N   | NC   | -- | -- | 0.27                                   | 0.26 | 0.41 | N   | NC | -- | -- |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.25                                 | 0.28 | 0.46 | N   | NC   | -- | -- | 0.25                                   | 0.25 | 0.41 | N   | NC | SC | S  |
| <b>Acoustic Casement Window</b><br>STC = 35                | Clear                                | 0.43                                 | 0.47 | 0.52 | --  | --   | -- | -- | 0.43                                   | 0.43 | 0.47 | --  | -- | -- | -- |
|  | Low-E                                | 0.32                                 | 0.31 | 0.46 | --  | --   | -- | -- | 0.32                                   | 0.28 | 0.42 | --  | -- | -- | -- |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.30                                 | 0.31 | 0.46 | N   | NC   | -- | -- | 0.30                                   | 0.28 | 0.42 | N   | NC | -- | -- |
| <b>Acoustic Casement Window</b><br>STC = 40                | Clear                                | 0.31                                 | 0.39 | 0.43 | N   | NC   | -- | -- | 0.31                                   | 0.35 | 0.39 | N   | NC | -- | -- |
|  | Low-E - ENERGY STAR® Package         | 0.25                                 | 0.22 | 0.38 | N   | NC   | SC | S  | 0.25                                   | 0.20 | 0.34 | N   | NC | SC | S  |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.23                                 | 0.22 | 0.38 | N   | NC   | SC | S  | 0.23                                   | 0.20 | 0.34 | N   | NC | SC | S  |
| <b>Acoustic Picture Window</b><br>STC = 40                 | Clear                                | 0.31                                 | 0.54 | 0.59 | N   | --   | -- | -- | 0.31                                   | 0.49 | 0.53 | N   | -- | -- | -- |
|  | Low-E - ENERGY STAR® Package         | 0.23                                 | 0.31 | 0.52 | N   | NC   | -- | -- | 0.23                                   | 0.28 | 0.47 | N   | NC | -- | -- |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.21                                 | 0.31 | 0.52 | N   | NC   | -- | -- | 0.21                                   | 0.28 | 0.47 | N   | NC | -- | -- |
| <b>Acoustic Picture Window</b><br>STC = 44                 | Clear                                | 0.31                                 | 0.54 | 0.59 | N   | --   | -- | -- | 0.31                                   | 0.48 | 0.53 | N   | -- | -- | -- |
|  | Low-E - ENERGY STAR® Package         | 0.24                                 | 0.31 | 0.51 | N   | NC   | -- | -- | 0.24                                   | 0.28 | 0.45 | N   | NC | -- | -- |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.22                                 | 0.31 | 0.52 | N   | NC   | -- | -- | 0.22                                   | 0.28 | 0.47 | N   | NC | -- | -- |
| <b>Acoustic Rolling Window</b><br>STC = 35                 | Clear                                | 0.49                                 | 0.57 | 0.62 | --  | --   | -- | -- | 0.49                                   | 0.51 | 0.56 | --  | -- | -- | -- |
|  | Low-E                                | 0.36                                 | 0.37 | 0.55 | --  | --   | -- | -- | 0.36                                   | 0.33 | 0.49 | --  | -- | -- | -- |
|  | Low-E/Argon                          | 0.32                                 | 0.37 | 0.55 | --  | --   | -- | -- | 0.32                                   | 0.33 | 0.49 | --  | -- | -- | -- |
| <b>Acoustic Rolling Window</b><br>STC = 40 (2- and 3-Lite) | Clear                                | 0.34                                 | 0.51 | 0.55 | --  | --   | -- | -- | 0.34                                   | 0.45 | 0.49 | --  | -- | -- | -- |
|  | Low-E - ENERGY STAR® Package         | 0.27                                 | 0.29 | 0.48 | N   | NC   | -- | -- | 0.27                                   | 0.26 | 0.43 | N   | NC | -- | -- |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.25                                 | 0.28 | 0.48 | N   | NC   | -- | -- | 0.25                                   | 0.25 | 0.43 | N   | NC | SC | S  |
| <b>Acoustic Rolling Window</b><br>STC = 44 (2- and 3-Lite) | Clear/Argon                          | 0.34                                 | 0.47 | 0.53 | --  | --   | -- | -- | 0.34                                   | 0.42 | 0.47 | --  | -- | -- | -- |
|  | Low-E/Argon - ENERGY STAR® Package   | 0.25                                 | 0.28 | 0.47 | N   | NC   | -- | -- | 0.25                                   | 0.25 | 0.42 | N   | NC | SC | S  |
| <b>Acoustic Hopper Window</b><br>STC = 33                  | Clear                                | 0.46                                 | 0.50 | 0.55 | --  | --   | -- | -- | 0.46                                   | 0.45 | 0.50 | --  | -- | -- | -- |
|  | Low-E                                | 0.34                                 | 0.32 | 0.49 | --  | --   | -- | -- | 0.34                                   | 0.29 | 0.44 | --  | -- | -- | -- |
|  | Low-E/Argon                          | 0.31                                 | 0.32 | 0.49 | --  | NC   | -- | -- | 0.31                                   | 0.29 | 0.44 | --  | NC | -- | -- |
|  | Low-E/Krypton - ENERGY STAR® Package | 0.30                                 | 0.32 | 0.49 | N   | NC   | -- | -- | 0.30                                   | 0.29 | 0.44 | N   | NC | -- | -- |

**NOTES:**

U-Factor in accordance with NFRC-100 and based on whole window values. Select glass types shown - others types are available subject to special inquiry. Tempered Low-E and Bronze tint glass will affect U-Factor, SHGc and VT values. Obscure glass is treated as Clear glass and shares the same thermal data. Tempered Glass window units may not meet the ENERGY STAR® Criteria. All Patio Door Glazing options are Tempered Glass only.

Test results shown are subject to change without notice due to periodic re-testing.



| 2015 ENERGY STAR® Qualification Criteria for Climate Zones |          |        |
|--|----------|--------|
| US Climate Zone  | U-Factor | SHGc   |
| N = Northern <sup>1</sup>                                  | ≤ 0.30   | ANY    |
| N = Northern <sup>2</sup>                                  | = 0.31   | ≥ 0.35 |
| N = Northern <sup>3</sup>                                  | = 0.32   | ≥ 0.40 |
| NC = North-Central   | ≤ 0.30   | ≤ 0.40 |
| SC = South-Central   | ≤ 0.30   | ≤ 0.25 |
| S = Southern   | ≤ 0.40   | ≤ 0.25 |



Zone compliance based on ENERGY STAR® Qualification Criteria outlined below effective January 1, 2015.  
For more ENERGY STAR® information visit [www.energystar.gov](http://www.energystar.gov)

**2015 ENERGY STAR® Qualification Criteria for Windows**

| United States Climate Zones | U-Factor    | SHGc        |                               |
|-----------------------------|-------------|-------------|-------------------------------|
| Northern <sup>1</sup>       | $\leq 0.30$ | ANY         | Prescriptive                  |
| Northern <sup>2</sup>       | $= 0.31$    | $\geq 0.35$ | Equivalent Energy Performance |
| Northern <sup>3</sup>       | $= 0.32$    | $\geq 0.40$ |                               |
| North-Central               | $\leq 0.30$ | $\leq 0.40$ |                               |
| South-Central               | $\leq 0.30$ | $\leq 0.25$ |                               |
| Southern                    | $\leq 0.40$ | $\leq 0.25$ |                               |

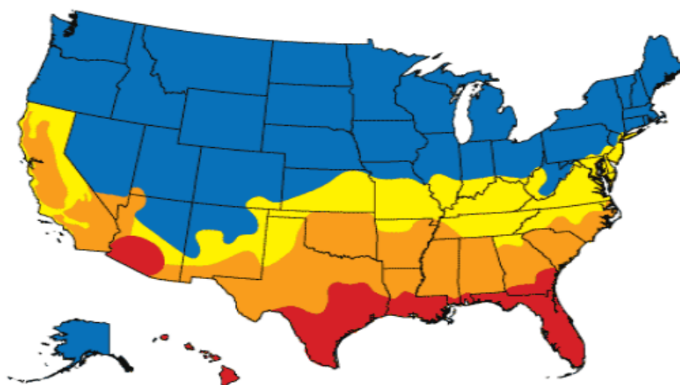
Northern Zone windows can meet the prescriptive (Northern<sup>1</sup>  $\leq 0.30$ /Any) criteria or the Equivalent Energy Performance (Northern<sup>2</sup> or Northern<sup>3</sup>) criteria to qualify for ENERGY STAR®.

**2015 ENERGY STAR® Qualification Criteria for Doors**

| United States Climate Zones | U-Factor    | SHGc                         |
|-----------------------------|-------------|------------------------------|
| Opaque (no glass)           | $\leq 0.17$ | No Rating                    |
| $\leq 1/2$ Lite of glass    | $\leq 0.25$ | $\leq 0.30$                  |
| $> 1/2$ Lite of glass       | $\leq 0.30$ | Northern<br>$\leq 0.40$      |
|                             |             | North-Central<br>$\leq 0.25$ |
|                             |             | South-Central<br>$\leq 0.25$ |
|                             |             | Southern<br>$\leq 0.25$      |

Door criteria shown applies to doors in all four Energy Star Climate Zones.  
Opaque doors do not have any glass.  
 $\leq 1/2$  Lite refers to doors where no more than 1/2 the door has glass.  
 $> 1/2$  Lite refers to doors where more than half the door has glass.

**2015 ENERGY STAR® Climate Zone Map - United States**



- Northern** Mostly Heating Days
- North-Central** More Heating and some Cooling Days
- South-Central** More Cooling and some Heating Days
- Southern** Mostly Cooling Days

Source: ENERGY STAR® Program Requirements for Windows, Doors and Skylights: Version 6.0 (January 1, 2015)