170921-03MC

# TECHNICAL DATA - Type xSF 10/1

| PHOTOVOLTAIC GLASS | 577 x 1017<br>Dark | <br>Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 34 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 79 | $V_{oc}$ (V) |
| Short-circuit current | 0,70 | $I_{sc}$ (A) |
| Voltage at nominal power | 54 | $V_{mpp}$ (V) |
| Current at nominal power | 0,62 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 577 | mm |
| Width | 1017 | mm |
| Thickness | 37 | mm |
| Surface area | 0,59 | sqm |
| Weight | 34 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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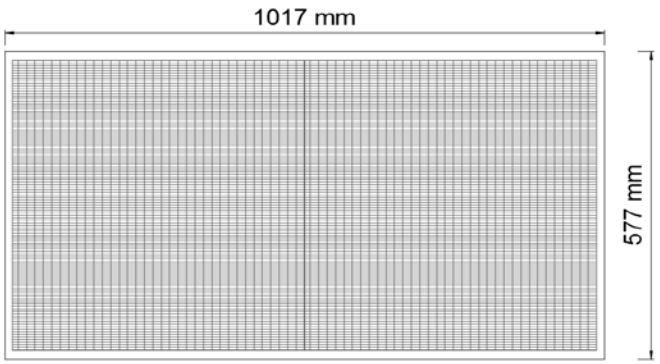
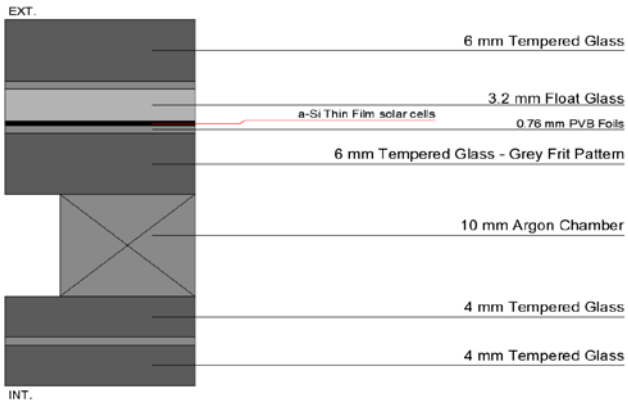
# TECHNICAL DATA - Type xSF 10/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 11/1

| PHOTOVOLTAIC GLASS | 711 x 1017<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 42 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 79 | $V_{oc}$ (V) |
| Short-circuit current | 0,86 | $I_{sc}$ (A) |
| Voltage at nominal power | 54 | $V_{mpp}$ (V) |
| Current at nominal power | 0,77 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 711 | mm |
| Width | 1017 | mm |
| Thickness | 37 | mm |
| Surface area | 0,72 | sqm |
| Weight | 42 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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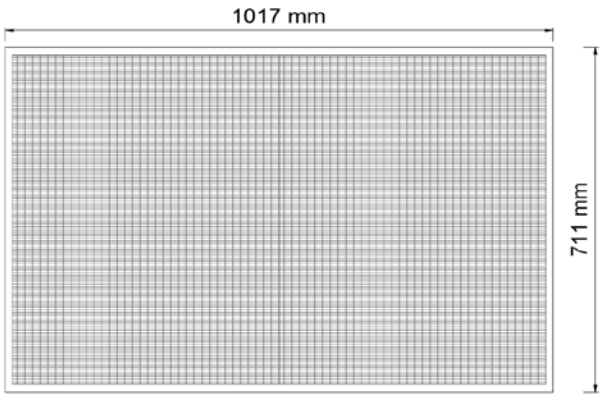
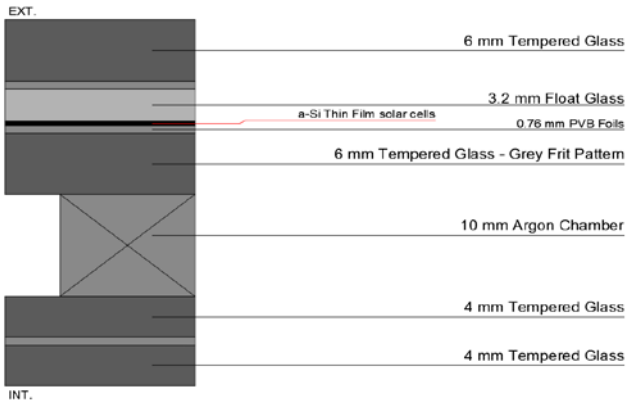
# TECHNICAL DATA - Type xSF 11/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 12/1

| PHOTOVOLTAIC GLASS | 723 x 1017 Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 42 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 79 | $V_{oc}$ (V) |
| Short-circuit current | 0,87 | $I_{sc}$ (A) |
| Voltage at nominal power | 54 | $V_{mpp}$ (V) |
| Current at nominal power | 0,78 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 723 | mm |
| Width | 1017 | mm |
| Thickness | 37 | mm |
| Surface area | 0,74 | sqm |
| Weight | 43 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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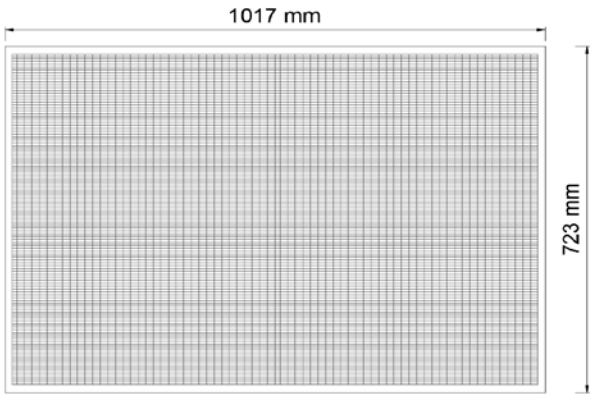
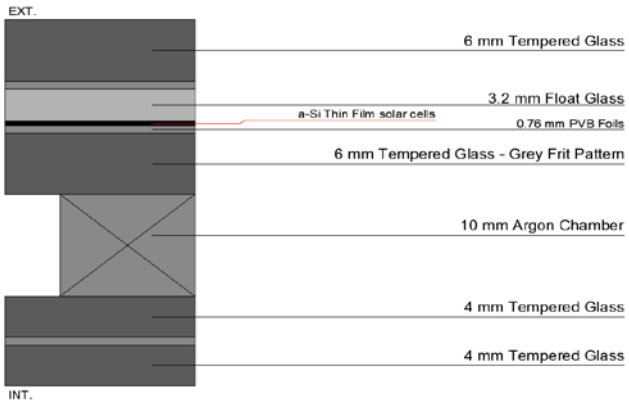
# TECHNICAL DATA - Type xSF 12/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 13/1

| PHOTOVOLTAIC GLASS | 1164 x 1017<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 68 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 79 | $V_{oc}$ (V) |
| Short-circuit current | 1,40 | $I_{sc}$ (A) |
| Voltage at nominal power | 54 | $V_{mpp}$ (V) |
| Current at nominal power | 1,25 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 1164 | mm |
| Width | 1017 | mm |
| Thickness | 37 | mm |
| Surface area | 1,18 | sqm |
| Weight | 69 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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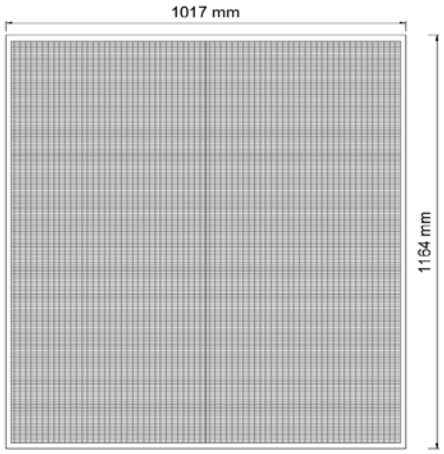
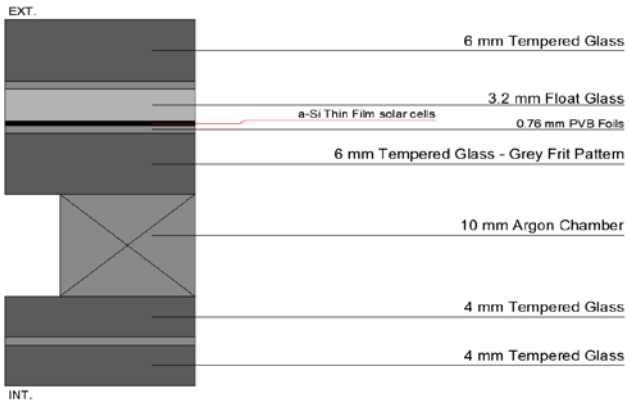
# TECHNICAL DATA - Type xSF 13/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 14/1

| PHOTOVOLTAIC GLASS | 1298 x 1017<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 73 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 79 | $V_{oc}$ (V) |
| Short-circuit current | 1,50 | $I_{sc}$ (A) |
| Voltage at nominal power | 54 | $V_{mpp}$ (V) |
| Current at nominal power | 1,34 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 1298 | mm |
| Width | 1017 | mm |
| Thickness | 37 | mm |
| Surface area | 1,32 | sqm |
| Weight | 77 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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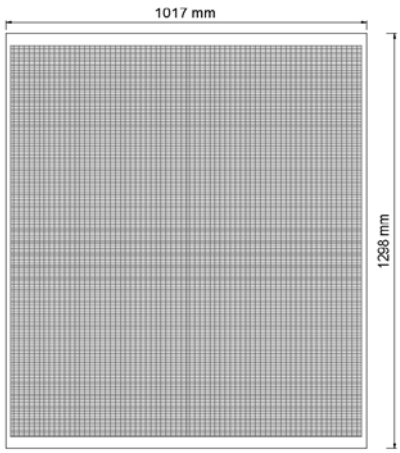
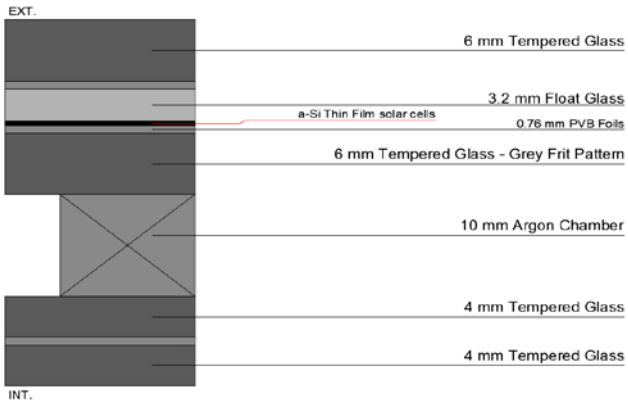
# TECHNICAL DATA - Type xSF 14/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 55,3 |

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# TECHNICAL DATA - Type xSF 15/1

| PHOTOVOLTAIC GLASS | 1310 x 1017<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 73 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 79 | $V_{oc}$ (V) |
| Short-circuit current | 1,50 | $I_{sc}$ (A) |
| Voltage at nominal power | 54 | $V_{mpp}$ (V) |
| Current at nominal power | 1,34 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 1310 | mm |
| Width | 1017 | mm |
| Thickness | 37 | mm |
| Surface area | 1,33 | sqm |
| Weight | 77 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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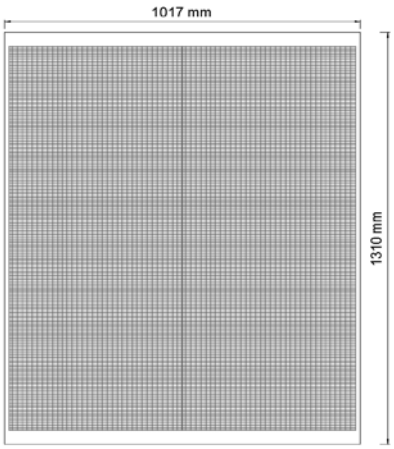
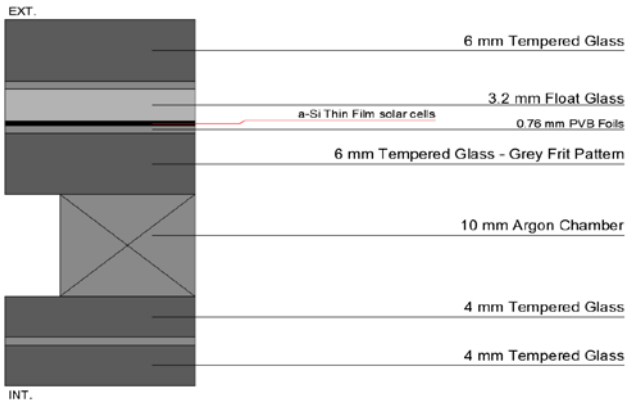
# TECHNICAL DATA - Type xSF 15/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 54,8 |

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# TECHNICAL DATA - Type xSF 16/1

| PHOTOVOLTAIC GLASS | 577 x 2957<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 98 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 231 | $V_{oc}$ (V) |
| Short-circuit current | 0,70 | $I_{sc}$ (A) |
| Voltage at nominal power | 158 | $V_{mpp}$ (V) |
| Current at nominal power | 0,62 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 577 | mm |
| Width | 2957 | mm |
| Thickness | 37 | mm |
| Surface area | 1,71 | sqm |
| Weight | 99 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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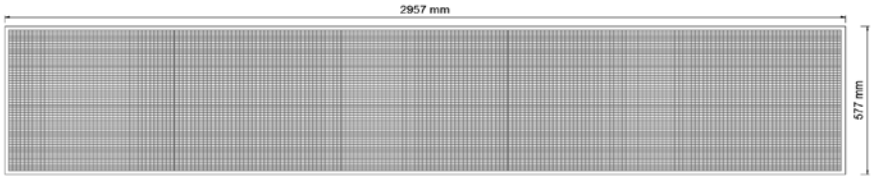
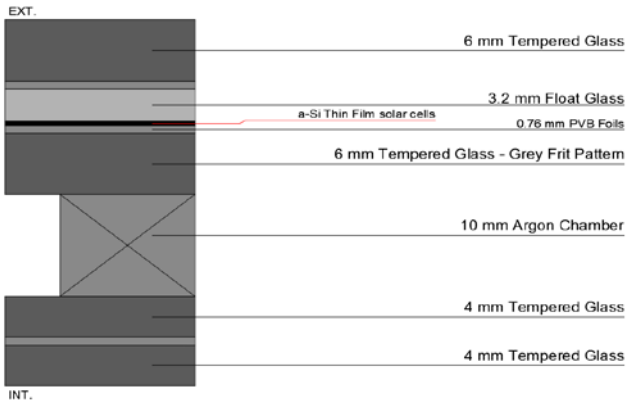
# TECHNICAL DATA - Type xSF 16/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 17/1

| PHOTOVOLTAIC GLASS | 711 x 2957<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 121 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 231 | $V_{oc}$ (V) |
| Short-circuit current | 0,86 | $I_{sc}$ (A) |
| Voltage at nominal power | 158 | $V_{mpp}$ (V) |
| Current at nominal power | 0,77 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 711 | mm |
| Width | 2957 | mm |
| Thickness | 37 | mm |
| Surface area | 2,10 | sqm |
| Weight | 122 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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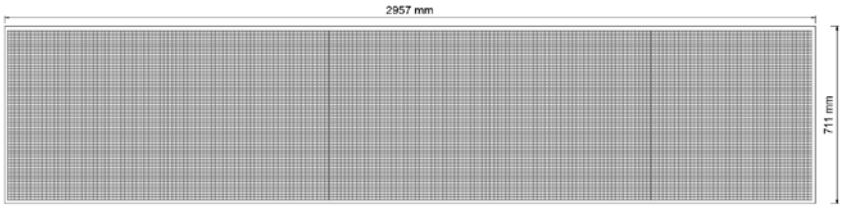
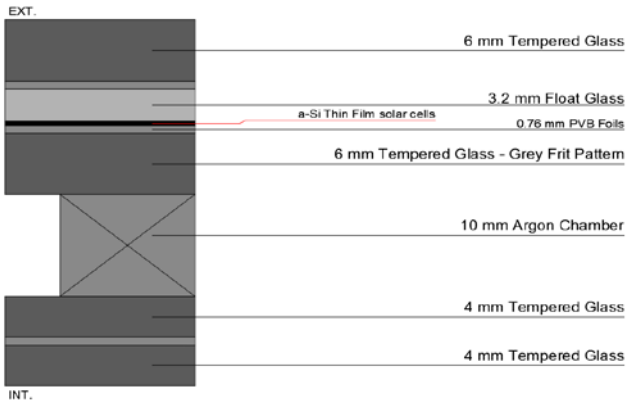
# TECHNICAL DATA - Type xSF 17/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 18/1

| PHOTOVOLTAIC GLASS | 723 x 2957<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 123 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 231 | $V_{oc}$ (V) |
| Short-circuit current | 0,87 | $I_{sc}$ (A) |
| Voltage at nominal power | 158 | $V_{mpp}$ (V) |
| Current at nominal power | 0,78 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 723 | mm |
| Width | 2957 | mm |
| Thickness | 37 | mm |
| Surface area | 2,14 | sqm |
| Weight | 124 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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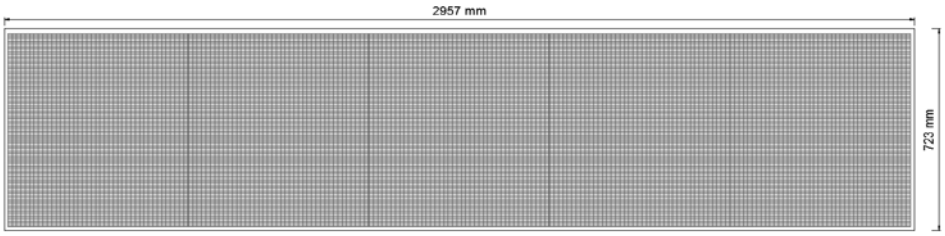
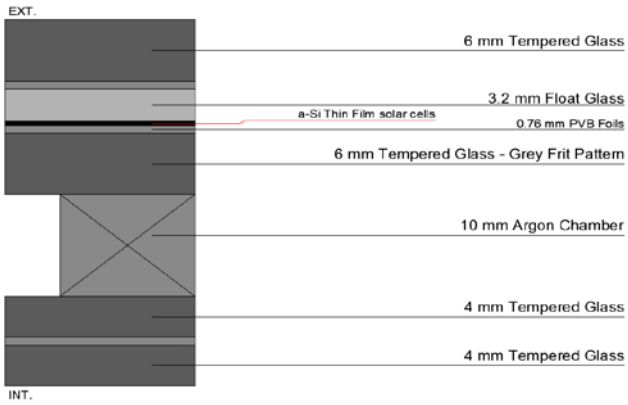
# TECHNICAL DATA - Type xSF 18/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 19/1

| PHOTOVOLTAIC GLASS | 1164 x 2957<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 198 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 231 | $V_{oc}$ (V) |
| Short-circuit current | 1,40 | $I_{sc}$ (A) |
| Voltage at nominal power | 158 | $V_{mpp}$ (V) |
| Current at nominal power | 1,25 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 1164 | mm |
| Width | 2957 | mm |
| Thickness | 37 | mm |
| Surface area | 3,44 | sqm |
| Weight | 200 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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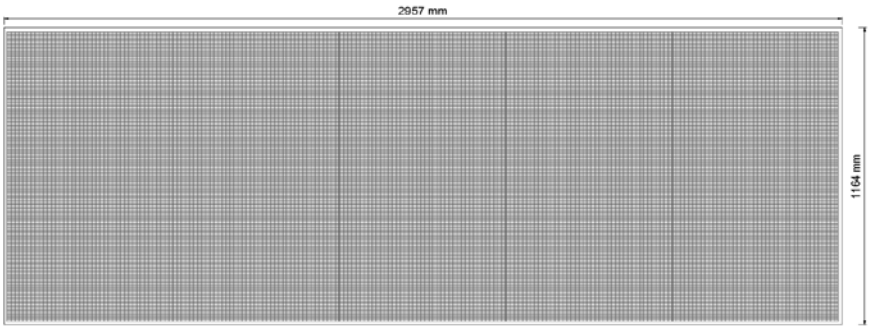
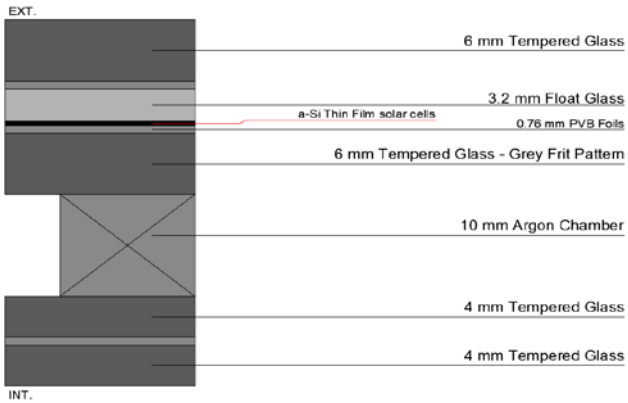
# TECHNICAL DATA - Type xSF 19/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 20/1

| PHOTOVOLTAIC GLASS | 1298 x 2957<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 212 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 231 | $V_{oc}$ (V) |
| Short-circuit current | 1,50 | $I_{sc}$ (A) |
| Voltage at nominal power | 158 | $V_{mpp}$ (V) |
| Current at nominal power | 1,34 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 1298 | mm |
| Width | 2957 | mm |
| Thickness | 37 | mm |
| Surface area | 3,84 | sqm |
| Weight | 223 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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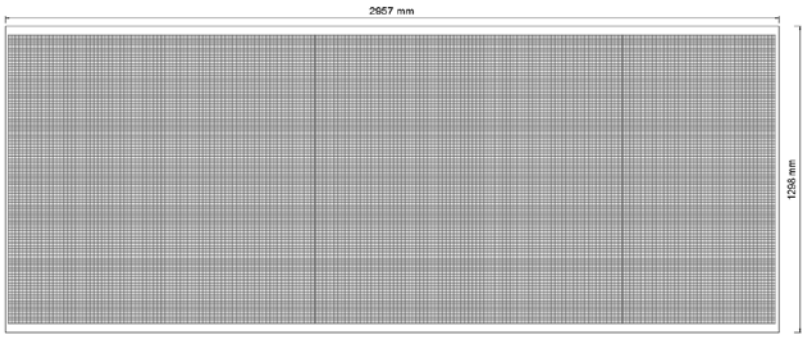
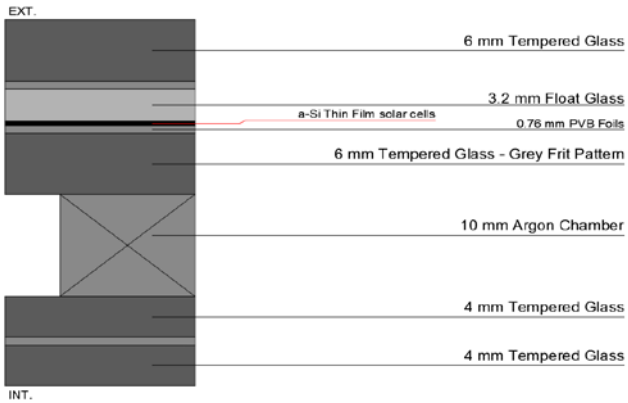
# TECHNICAL DATA - Type xSF 20/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 55,3 |

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# TECHNICAL DATA - Type xSF 21/1

| PHOTOVOLTAIC GLASS | 1310 x 2957 Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 212 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 231 | $V_{oc}$ (V) |
| Short-circuit current | 1,50 | $I_{sc}$ (A) |
| Voltage at nominal power | 158 | $V_{mpp}$ (V) |
| Current at nominal power | 1,34 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 1310 | mm |
| Width | 2957 | mm |
| Thickness | 37 | mm |
| Surface area | 3,87 | sqm |
| Weight | 225 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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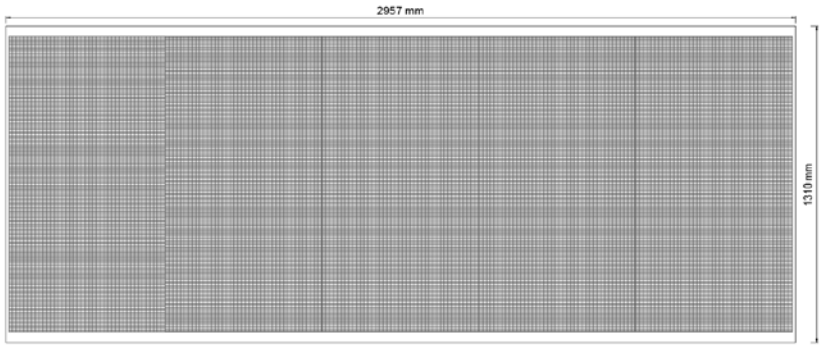
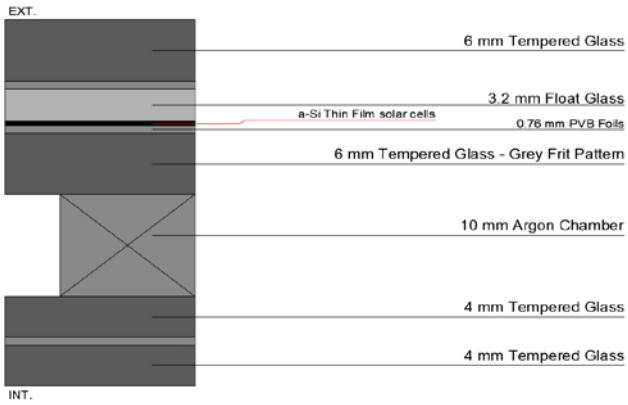
# TECHNICAL DATA - Type xSF 21/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 54,8 |

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# TECHNICAL DATA - Type xSF 22/1

| PHOTOVOLTAIC GLASS | 577 x 2731<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 91 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 213 | $V_{oc}$ (V) |
| Short-circuit current | 0,70 | $I_{sc}$ (A) |
| Voltage at nominal power | 146 | $V_{mpp}$ (V) |
| Current at nominal power | 0,62 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 577 | mm |
| Width | 2731 | mm |
| Thickness | 37 | mm |
| Surface area | 1,58 | sqm |
| Weight | 91 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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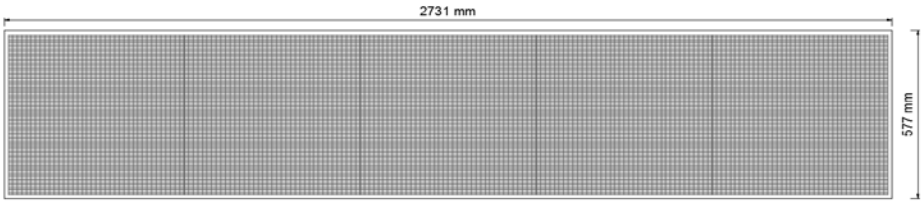
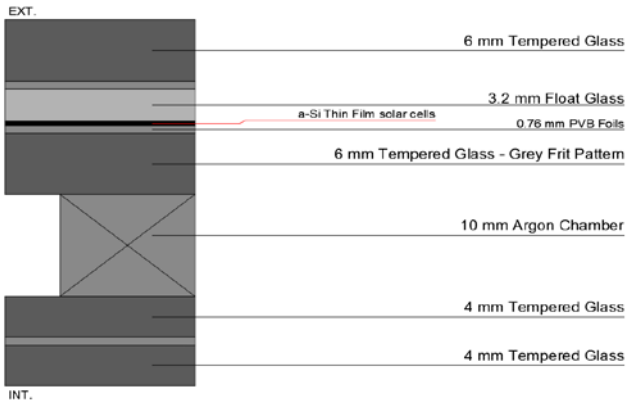
# TECHNICAL DATA - Type xSF 22/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 23/1

| PHOTOVOLTAIC GLASS | 723 x 2731<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 114 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 213 | $V_{oc}$ (V) |
| Short-circuit current | 0,87 | $I_{sc}$ (A) |
| Voltage at nominal power | 146 | $V_{mpp}$ (V) |
| Current at nominal power | 0,78 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 723 | mm |
| Width | 2731 | mm |
| Thickness | 37 | mm |
| Surface area | 1,97 | sqm |
| Weight | 115 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

* All technical specifications are subject to change without notice by Onyx Solar

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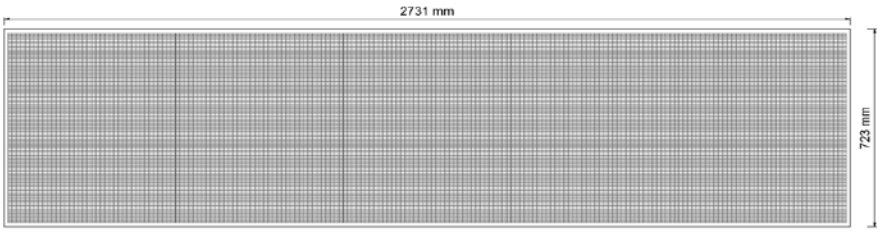
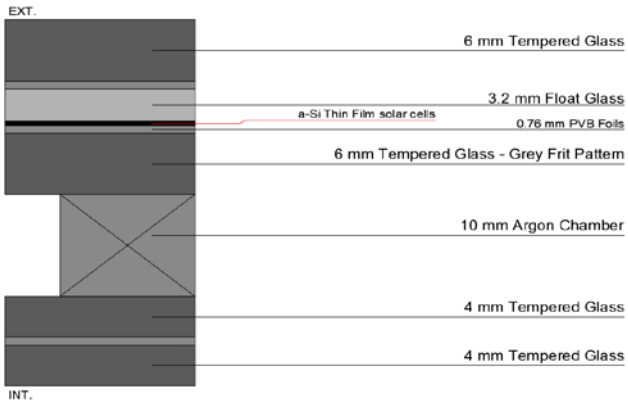
170921-03MC

# TECHNICAL DATA - Type xSF 23/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 24/1

| PHOTOVOLTAIC GLASS | 757 x 2731 Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 119 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 213 | $V_{oc}$ (V) |
| Short-circuit current | 0,91 | $I_{sc}$ (A) |
| Voltage at nominal power | 146 | $V_{mpp}$ (V) |
| Current at nominal power | 0,81 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 757 | mm |
| Width | 2731 | mm |
| Thickness | 37 | mm |
| Surface area | 2,07 | sqm |
| Weight | 120 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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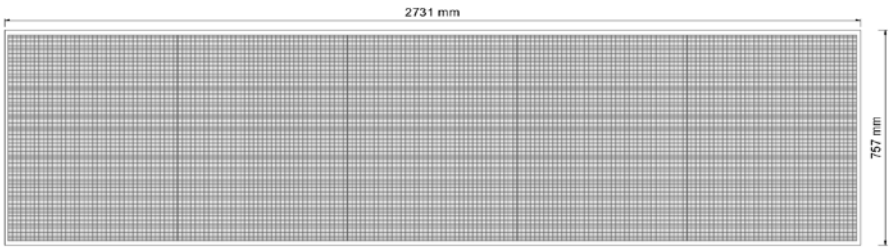
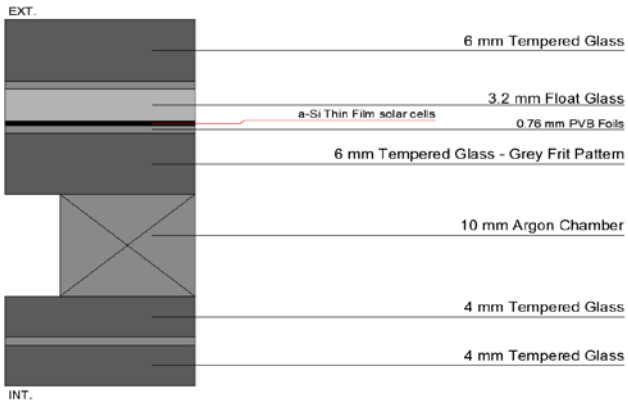
# TECHNICAL DATA - Type xSF 24/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 25/1

| PHOTOVOLTAIC GLASS | 1164 x 2731<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 183 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 213 | $V_{oc}$ (V) |
| Short-circuit current | 1,40 | $I_{sc}$ (A) |
| Voltage at nominal power | 146 | $V_{mpp}$ (V) |
| Current at nominal power | 1,25 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 1164 | mm |
| Width | 2731 | mm |
| Thickness | 37 | mm |
| Surface area | 3,18 | sqm |
| Weight | 184 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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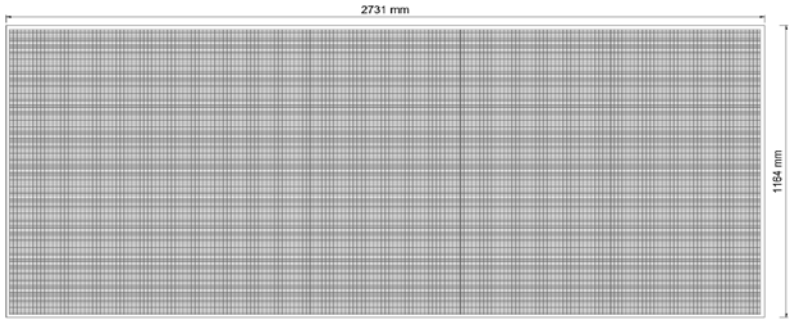
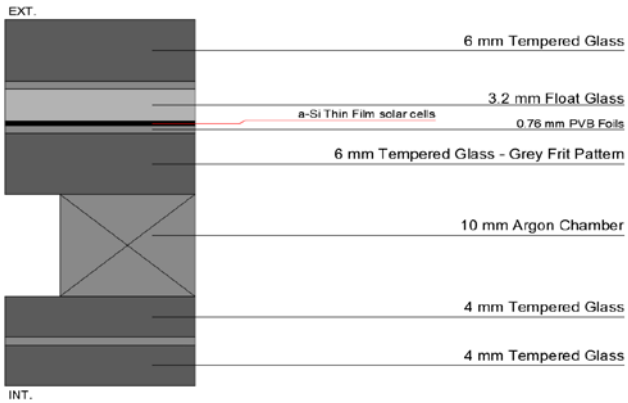
# TECHNICAL DATA - Type xSF 25/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 57,6 |

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# TECHNICAL DATA - Type xSF 26/1

| PHOTOVOLTAIC GLASS | 1310 x 2731<br>Dark | Clear-0% |
|---|---|---|
| **Electrical data test conditions (STC)** | | |
| Nominal peak power | 196 | $P_{mpp}$ (Wp) |
| Open-circuit voltage | 213 | $V_{oc}$ (V) |
| Short-circuit current | 1,50 | $I_{sc}$ (A) |
| Voltage at nominal power | 146 | $V_{mpp}$ (V) |
| Current at nominal power | 1,34 | $I_{mpp}$ (A) |
| Power tolerance not to exceed | ±5 | % |
| STC: 1000 w/m², AM 1.5 and a cell temperature of 25°C, stabilized module state. | | |
| **Mechanical description** | | |
| Length | 1310 | mm |
| Width | 2731 | mm |
| Thickness | 37 | mm |
| Surface area | 3,58 | sqm |
| Weight | 208 | Kgs |
| Cell type | a-Si | Thin Film |
| Transparency degree | Dark | Clear-0% |
| Front Glass | 6 mm | Tempered Glass |
| PV Active Glass | 3,2 mm | Float Glass |
| Rear Glass | 6 mm | Tempered Glass |
| Air Chamber | 10 mm | Argon Chamber |
| Inner Glass | 4 mm | Tempered Glass |
| Inner Glass | 4 mm | Tempered Glass |
| Thickness encapsulation | 2,28 mm | PVB Foils |
| Category / Color code | Grey | Frit Pattern |
| **Junction Box** | | |
| Protection | IP65 | |
| Wiring Section | 2,5 $mm^2$ or 4,0 $mm^2$ | |
| **Limits** | | |
| Maximum system voltage | 1000 | Vsys (V) |
| Operating module temperature | -40...+85 | °C |
| **Temperature Coefficients** | | |
| Temperature Coefficient of Pmpp | -0,19 | %/ºC |
| Temperature Coefficient of Voc | -0,28 | %/ºC |
| Temperature Coefficient of Isc | +0,09 | %/ºC |

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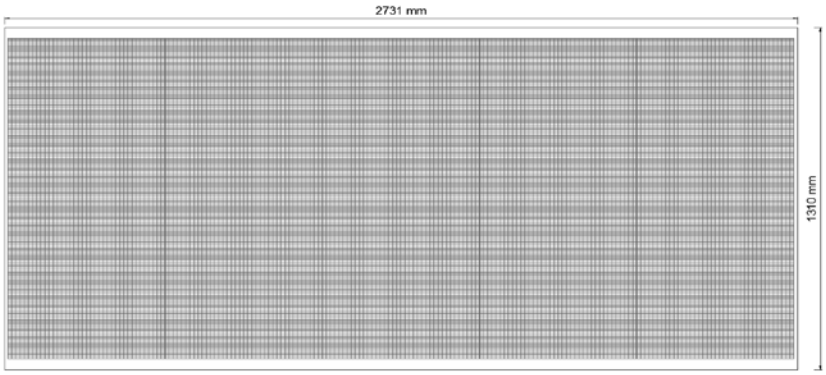
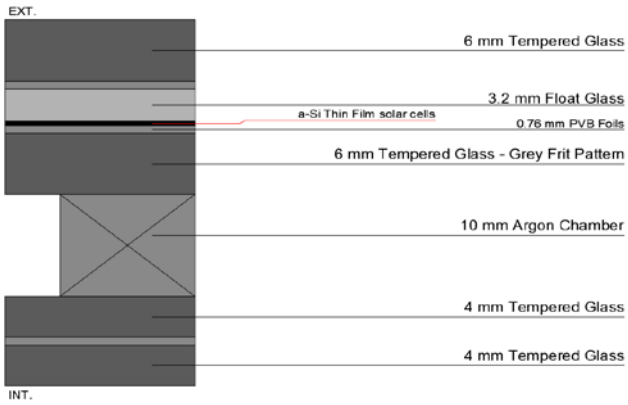
# TECHNICAL DATA - Type xSF 26/1

## PV GLASS DIMENSIONS




## PV GLASS CONFIGURATION




Total thickness: 37 mm

| GLASS PROPERTIES | Onyx Equivalent Glass |
|---|---|
| Solar Factor/SHGC | 6.00% |
| Light Transmission | 0.00% |
| UV Transmission | < 1% |
| Light Reflection | 8% |
| U-value [W/sqm.K] | 2,7 |
| Peak Power [Wp/sqm] | 54,8 |

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