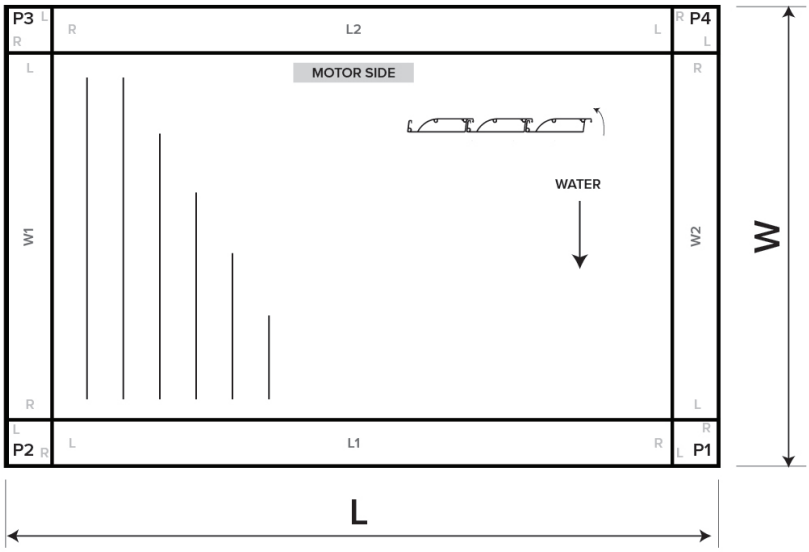
Pergola Technical Specs

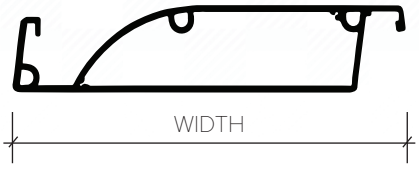
Maximum Dimensions

Single Unit:
- 19’ - 8.22” L x 14’ - 9.16” W
- 20’ - 11.96” L x 13’ - 1.48” W

Coupled:
- 20’ - 9.60” L x 13’ - 9.35” W

Maximum Height
- Free standing Pergola: **9’ - 10.11”**
- Attached to the facade with NO screens/side elements: **11’ - 5.79”**

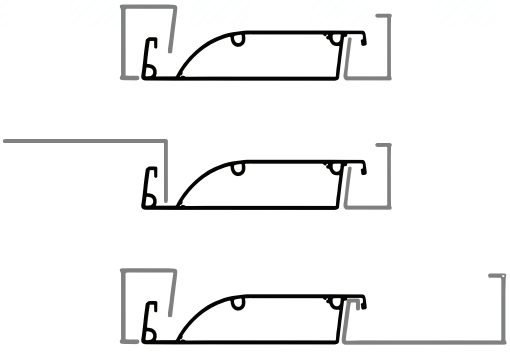




1 louver blade width: **8.27”**

The louver’s start and end blades can be tailored with precision exactly to the millimeter up to 10mm. This means louvers are not limited only to multiples of 8.27”

Sample configurations:

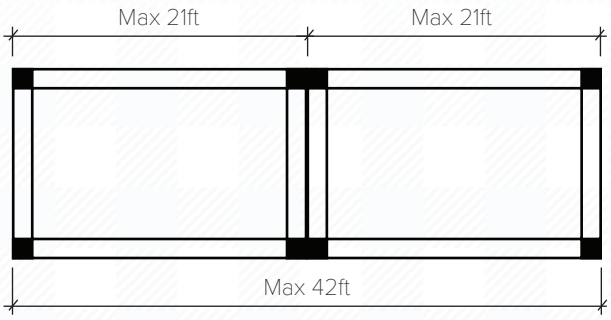


Other Dimensions

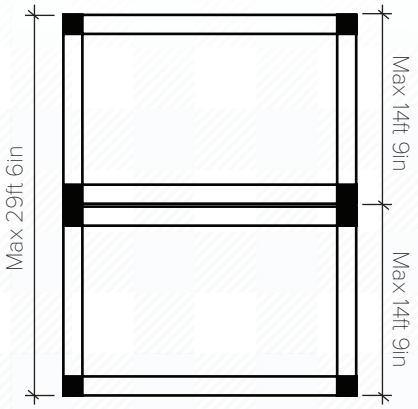
- Cross beam height: **9.45”**
- Standard post: **5.9”**
- Intermediate post: **5.9”** or **3.54”**

Standard vs. Coupled versions

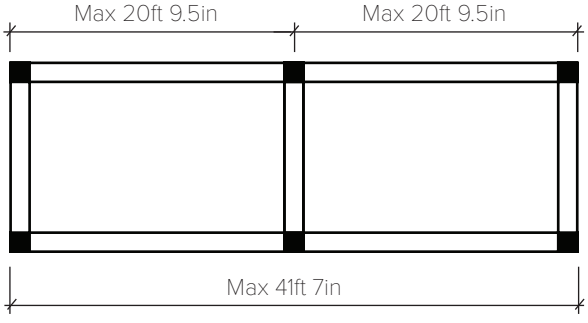
2 Standard Modules
- 2 structures & 2 motors
- 2 units x 4 poles = 8 poles
- Maximum length L = $L^L + L^R$ = 42ft.
- No parts in common



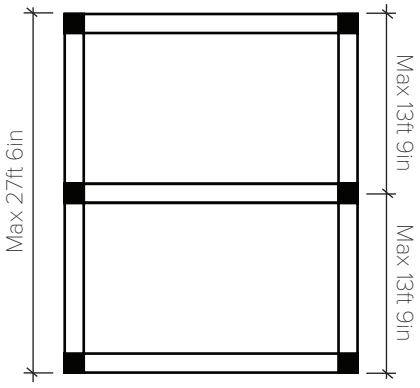
2 Standard Modules
- 2 structures & 2 motors
- 2 units x 4 poles = 8 poles
- Maximum length W = $W^L + W^R$ = 29ft 6in
- No parts in common



2 Coupled Modules (W side)
- 2 structures & 2 motors
- 4 + 2 = 6 poles
- Maximum length L = $L^{BL} + L^{BR}$ = 41ft 7in
- Has parts in common



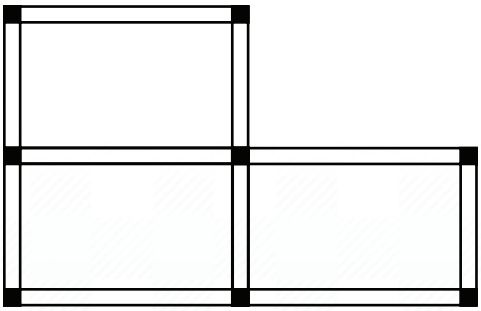
2 Coupled Modules (L side)
- 2 structures & 2 motors
- 4 + 2 = 6 poles
- Maximum width W = $W^{CL} + W^{CR}$ = 27ft 6in
- Has parts in common



3 Coupled Modules (L & W side)

Non-rectangular form

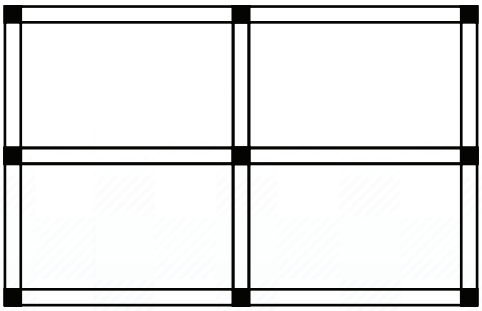
- 3 structures & 3 motors
- 4 + 2 + 2 = 8 poles



4 Coupled Modules (L & W side)

Rectangular form

- 4 structures & 4 motors
- 4 + 2 + 3 = 9 poles



Wind Resistance

- Structure & louvers
  - Up to 172 sq.ft. and W-side less than or equal to 118": gusts of wind to **75mph***
  - For all other cases: up to **62mph***
    - ~The wind sensor rotates the blades at a minimum of 30° when the wind speed exceeds 62mph
    - ~ If the temperature drops below 3° C and it rains (or snows), the blades rotate 90°
- Screen
  - Up to 108 sq.ft: **31 mph**
  - If greater than 108 sq.ft: **24 mph** (wind sensor pulls up the screen automatically)
  - Screens must be lifted manually during light winds

Snow Load

The maximum snow load depends on the L or W dimension:

L max	177.17	196.85	216.54	236.22	251.97
W max	88.58	118.11	147.64	177.17	
lbs/sq.ft.	46.00	35.78	30.67	22.49	15.33

It is advisable to use a snow sensor in regions with a risk of snow, and let the snow sensors do their work.

- With a load of greater than 5.11 lbs/sq.ft, no water tightness is guaranteed, and there is a risk of damage due to frost during long frost periods.
- For a load greater than 25.56 lbs./sq.ft, wall mounting must be provided.

*Certain conditions must be met.

Sensors

- The **thermometer** is the standard security sensor which activates at 37.4°F and opens the slats by 10° so the blades do not freeze together.

- If a **wind sensor** is present, the two sensors open the blades at 30° for wind speeds greater than 62mph.

- If a **rain sensor** is present, the two sensors open the blades 90° to avoid any snow accumulation.

- This can also be **disabled** if you want the blades to stay at 10°.

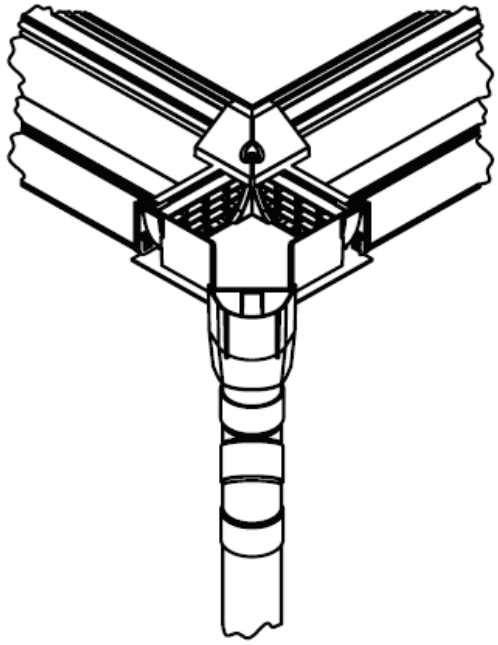
Scenarios:

Only the thermometer is active
- 37.4°F or colder + dry = blades at 10°
- 37.4°F or colder + rain = blades at 10°
- 37.4°F or colder + snow = blades at 10°

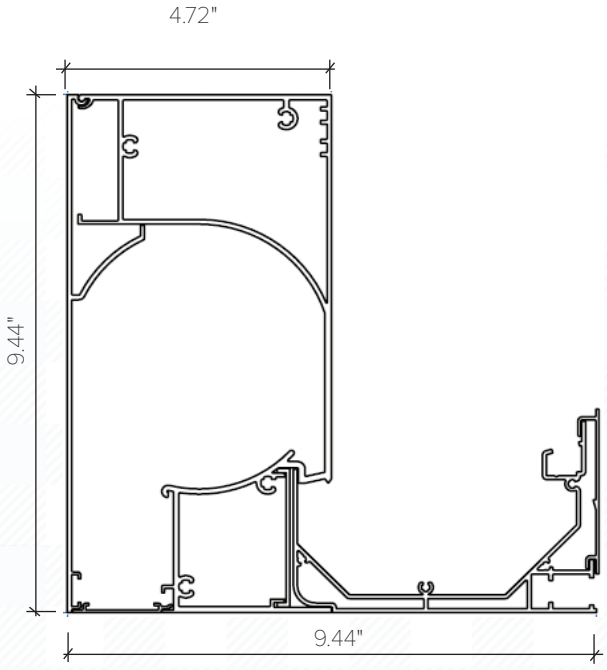
Only the ran sensor is active
- Rain = closed blades
- Snow = closed blades

Both the thermometer & rain sensor are active
- 37.4°F or colder + dry = blades at 10°
- 37.4°F or colder + rain = blades at 90° (registers as snow)
- 37.4°F or colder + snow = blades at 90°
- Warmer than 37.4°F + dry = no action
- Warmer than 37.4°F + rain = closed blades
- Warmer than 37.4°F + snow = closed blades (since snow will not stay)

Water drainage
6,086 ounce or 10.76 sq.ft./hour as per European standard NBN EN 12056-3. This corresponds to 2 minutes of rain shower that occurs once every 15 years. This only applies if there are 2 drains on the lower side of the louver.



GUTTER W/ 50mm DIAMETER PVC PIPE DRAINAGE IN POST



GUTTER PROFILE

The closed blades have an invisible slope of 2 °. The rainwater is diverted towards L1 (therefore away from the motor on L2). There are 4 rain gutters that are connected to each other around the slats. The water is led away through the rain gutters to Post 1 & Post 2. At the bottom of the pole, an opening can be provided for the drainage.

ACCESSORIES

Integrated Audio Bluetooth
- 2 amplifiers x 50 Watts RMS
- Control is via bluetooth and not the Casambi app
- Waterproof
- Comes in a set of 2 or 4 speakers

USB Connections
- 110V or 230V options
- For charging gadgets, not data transfer

USB connection can be in one of the posts

Video Projection

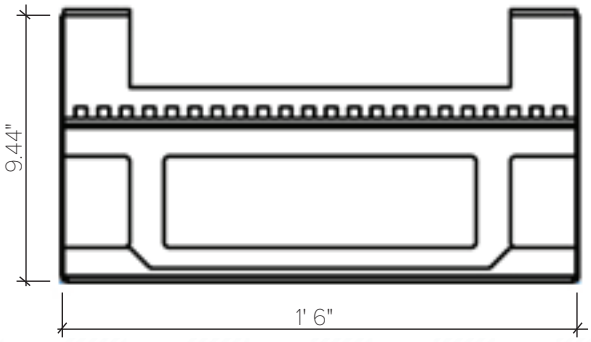
Projector

- Only the holder can be provided, not the projector
- Upgrade includes HDMI connection integrated in the post & crossbar (housing)
- Minimum required lumens:
    - For daytime: 2,500 lumens w/ all slides and screens closed
    - For nighttime: 500 lumens

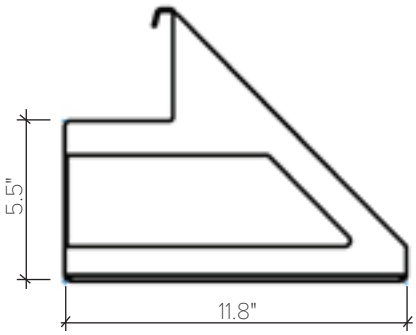
Screen

- White PVC opaque projection fabric is also available
- Maximum oversized width: 14’9” (Z value: 13’9”)
- Resistant to wind class 1 (4 Beaufort)

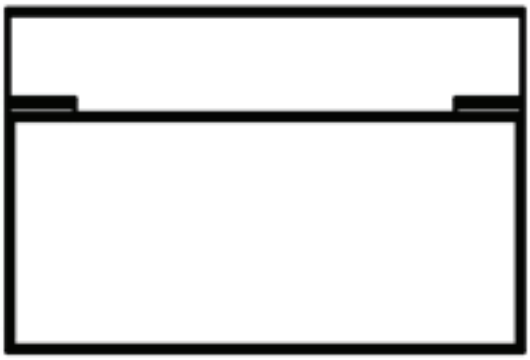
Similarly, HDMI connection can be in one of the posts or in the upper beam



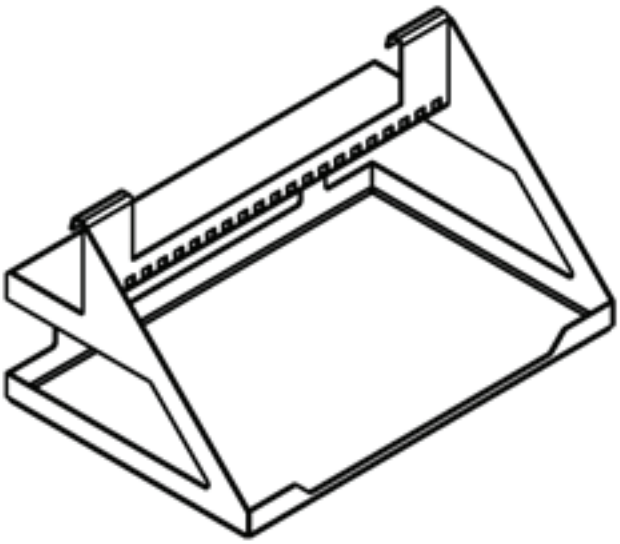
FRONT VIEW



LEFT SIDE VIEW

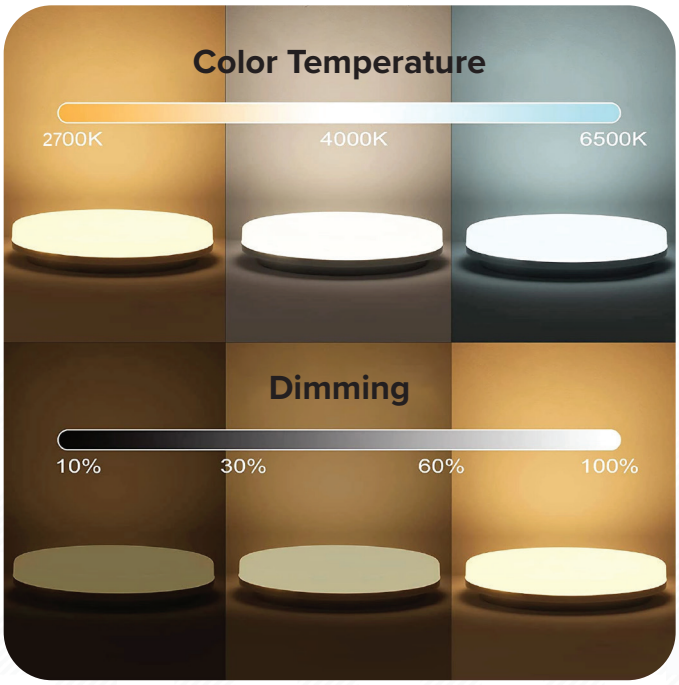


TOP VIEW



ISOMETRIC VIEW

Lighting
Depending on the model, the direct LED lights can range from warm white (2700K) to cool white (6500K) and can be dimmable.



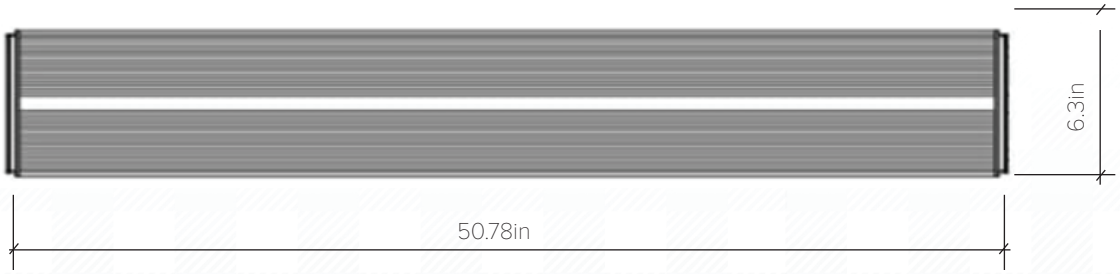
Another upgrade is dimmable, indirect RGB lighting. About 16 million color combinations are possible, but perfect white light is not included.

Pergolas can also be fitted with recessed LED spotlights comparable to 35-watt waterproof halogen spotlights.

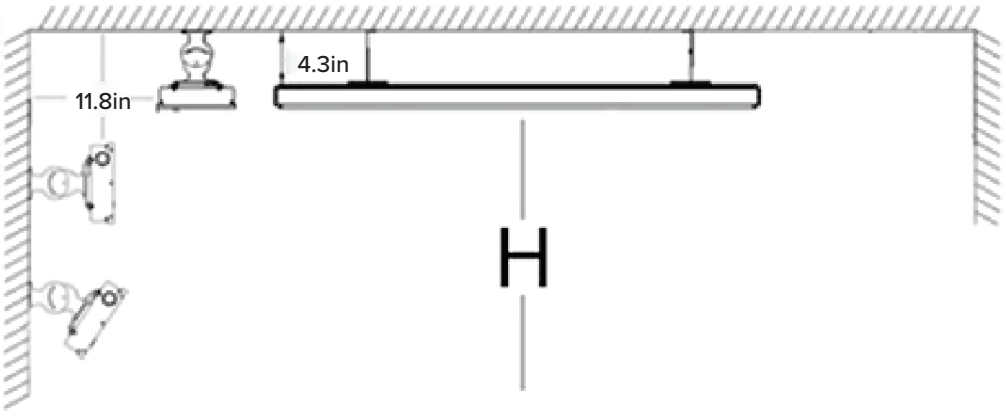
Heaters

- Heater types:
    - 2600W design heater
    - 3000W standard heater

- Heater Dimensions:



- Can be controlled via the Casambi app
- In anodized aluminum finish with black heating surface
- Radiator temperature cannot be regulated, only switched on/off
- Requires separate cable power and 16 amp fuse
- Best mounted between 6’10” to 8’10” in height (H), measured from the ground:



Controls

Aside from controlling some accessories via the Casambi app, the Pergola can also use:

- Handheld transmitter (4 or 8 channels)
- Push buttons integrated in the pole
    - Metallic, waterproof, with built-in LED
    - Installed in the same post with electric modules
    - Available in sets of 1x4, 2x4, or 3x4 buttons