



Vision Module System

The state of the art system for overhead solar

System Overview

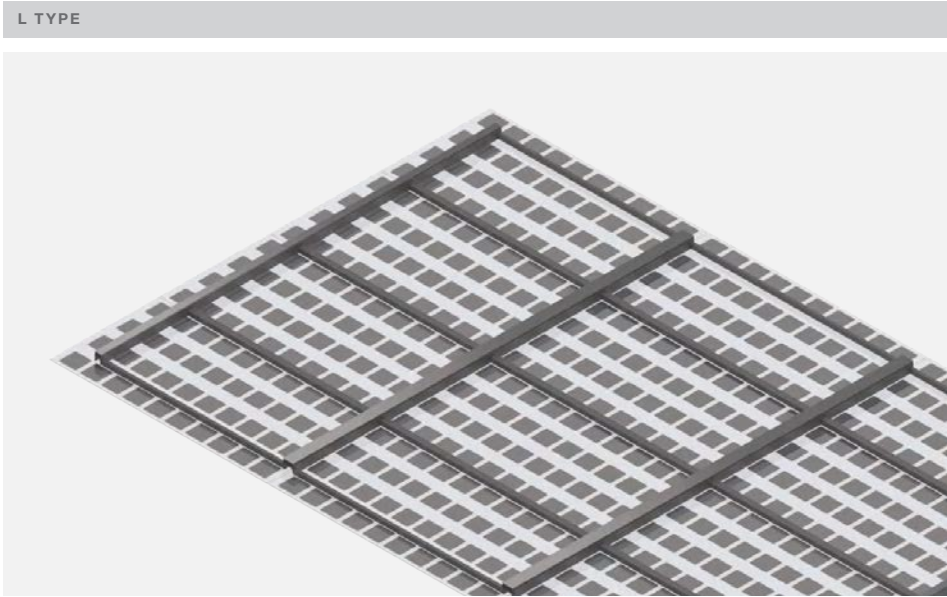
The Vision Module System is an integrated module and racking system that offers designers unparalleled freedom to meet their project's power and light transmittance requirements with an off-the-shelf, modular system. The Vision Module System is based on glass-glass bifacial modules available in two primary form factors, each with a variety of cell layout and mounting options.

- Numerous cell layout options
- Ultra durable glass glass construction
- Integrated wireway
- Concealed conductors
- Concealed junction boxes
- Weatherproofing



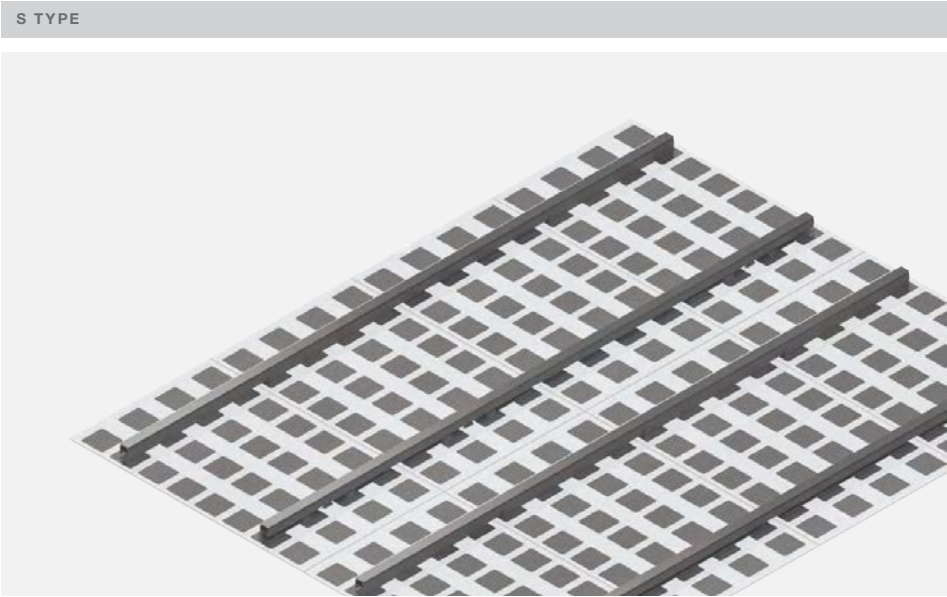
Module Overview

The Vision Module System is based on two primary module Types: L Type or S Type. L Type modules have a maximum of 72 cells and S Type modules have a maximum of 60 cells. Each module Type offers unique mounting options for another level of customization.



The L Type mounting options create cantilevered glass edges for a floating glass edge at the perimeter of your array.

- Cantilevered edge
- Edge and shared rails
- Ideal for contiguous arrays



The S Type is an interior mount solution meaning all edges of the module are exposed. It's ideal for unique module mounting scenarios and non-contiguous arrays.

- Floating edges on all sides
- Edge rails only
- Ideal for unique configurations

Module Configurations

The Vision Module System is configured by selecting one of each:

Type: Specifies module dimension

Matrix: Specifies cell count

Mount: Specifies the mounting frame Type

Part Number Configuration

SELECT TYPE	L TYPE				S TYPE			
SELECT MATRIX	72 430 W • 08% T	60 355 W • 21% T	40 240 W • 47% T	0 0 W • 86% T	60 355 W • 13% T	48 285 W • 29% T	32 190 W • 50% T	0 0 W • 86% T
SELECT MOUNT	PM EM RM LM RC LC				IM			

EXAMPLE PART NUMBER: L - 72 - PM → L-72-430-08-PM

L -
 72 -
 PM →
 L-72-430-08-PM

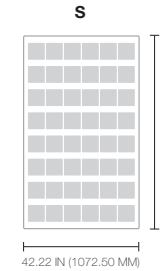
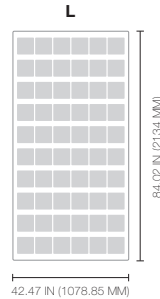
TYPE
MATRIX
MOUNT

* Power Output is Rated Power at STC (front side); Light Transmittance is calculated based on cell coverage and not a result of testing.

L TYPE	S TYPE
<p>Step 1: Select Type</p> <div style="text-align: center; margin: 20px 0;"> </div> <p style="font-size: x-small; margin-top: 10px;">Note: L and S Type modules are different widths due to the L Type mount options extending past the glass edge</p>	<p>Step 1: Select Type</p> <div style="text-align: center; margin: 20px 0;"> </div>
<p>Step 2: Select Matrix</p> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> 72 Cells <small>430W 08% Transmittance</small> </div> <div style="text-align: center;"> 60 Cells <small>355W 21% Transmittance</small> </div> <div style="text-align: center;"> 40 Cells <small>240W 47% Transmittance</small> </div> <div style="text-align: center;"> 0 Cells <small>0W 86% Transmittance</small> </div> </div>	<p>Step 2: Select Matrix</p> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> 60 Cells <small>355W 13% Transmittance</small> </div> <div style="text-align: center;"> 48 Cells <small>285W 29% Transmittance</small> </div> <div style="text-align: center;"> 32 Cells <small>190W 50% Transmittance</small> </div> <div style="text-align: center;"> 0 Cells <small>0W 88% Transmittance</small> </div> </div>
<p>Step 3: Select Mount</p> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <small>Left Corner (LC)</small></div> <div style="text-align: center;"> <small>Edge Mount (EM)</small></div> <div style="text-align: center;"> <small>Right Corner (RC)</small></div> <div style="text-align: center;"> <small>Left Mount (LM)</small></div> <div style="text-align: center;"> <small>Perimeter Mount (PM)</small></div> <div style="text-align: center;"> <small>Right Mount (RM)</small></div> </div>	<p>Step 3: Select Mount</p> <div style="text-align: center; margin-top: 20px;"> Interior Mount (IM) </div>

Module Specifications

TEMPERATURE COEFFICIENTS	
NOMINAL OPERATING CELL TEMPERATURE (NOCT)	44.6 °C
POWER TEMPERATURE COEFFICIENT (PMPP)	- 0.376% / °C
VOLTAGE TEMPERATURE COEFFICIENT (VOC)	- 0.322% / °C
CURRENT TEMPERATURE COEFFICIENT (ISC)	0.054% / °C

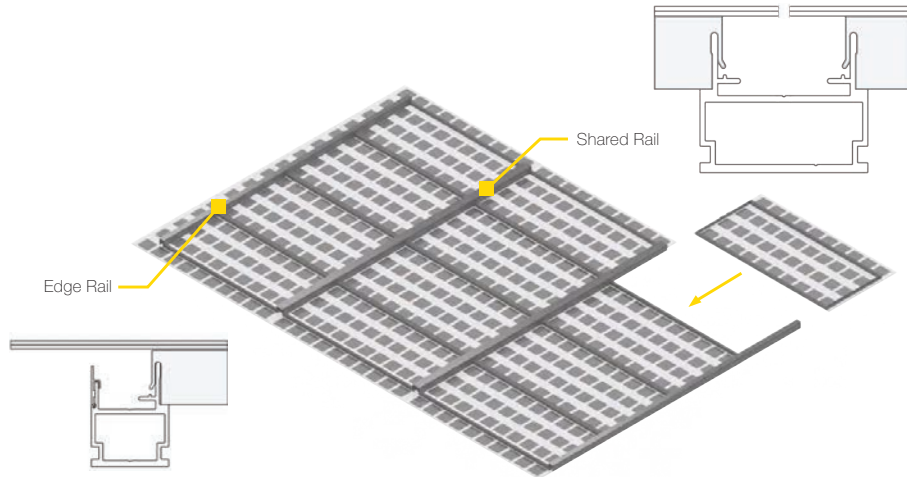


MATRIX	CELLS	L TYPE				S TYPE			
		72	60	40	00	60	48	32	00
	POWER	430 W	355 W	240 W	0 W	355 W	285 W	190 W	0 W
	TRANSMITTANCE	8%	21%	47%	86%	13%	29%	50%	88%
	PEAK POWER VOLTAGE (VMP)	39.9 V	32.9 V	22.24 V	0 V	32.9 V	26.6 V	17.7 V	0 V
	MAXIMUM POWER CURRENT (IMP)	10.8 A	10.8 A	10.8 A	0 A	10.8 A	10.8 A	10.9 A	0 A
	OPEN CIRCUIT VOLTAGE (VOC)	49.2 V	41.0 V	27.4 V	0 V	41.0 V	32.8 V	21.9 V	0 V
	SHORT CIRCUIT CURRENT (ISC)	11.3 A	11.4 A	11.4 A	0 A	11.4 A	11.4 A	11.4 A	0 A
	MODULE EFFICIENCY	18.8%	15.5%	10.5%	0%	18.4%	14.8%	9.9%	0%
	OPERATING TEMPERATURE	- 40°C TO 85°C							
	MAXIMUM SYSTEM VOLTAGE	1500 V							
	MAXIMUM TYPE FUSE RATING	25 A							
	POWER TOLERANCE	- 3/+3%							
	SOLAR CELL	MONOCRYSTALLINE BIFACIAL 6.5" X 6.5" (166 MM X 166 MM)							
	CELL LAYOUT	6 X 12	6 X 10	4 X 10	0	6 X 10	6 X 8	4 X 8	0
	MODULE DIMENSIONS	84.02 IN X 42.47 IN X 2.06 IN (2134 MM X 1078.85 MM X 52.17 MM)				70.77 IN X 42.22 IN X 2.06 IN (1797.50 MM X 1072.50 MM X 52.17 MM)			
	MODULE AREA	24.6 FT² (2.3M²)				20.8 FT² (1.9M²)			
	FRONT / BACK GLASS	FULLY TEMPERED 3.2MM LOW-IRON PV GLASS							
	MODULE WEIGHT	105.5 LBS (47.8 KG)				78.6 LBS (35.6 KG)			
	SYSTEM WEIGHT / AREA	SD 4.85 PSF (23.68 KG/M²) MD 5.06 PSF (24.71 KG/M²) HD 5.99 PSF (29.25 KG/M²)				SD 4.55 PSF (22.22 KG/M²) MD 4.81 PSF (23.48 KG/M²) HD 6.52 PSF (31.83 KG/M²)			
	STATIC LOAD	MAX +105 PSF / -108 PSF SEE ENGINEERING LETTER FOR TYPE SPECIFIC LOAD RATING							
	OUTPUT CABLES	LEAD LENGTH 500MM STAUBLI MC4 CONNECTORS							
	FIRE RATING	CLASS A / TYPE 29							
	CERTIFICATIONS	UL 61730							
	WARRANTY	10 YEARS WORKMANSHIP / 30 YEARS LINEAR POWER PRODUCTION (POWER PRODUCTION WARRANTY ON FRONT SIDE STC ONLY)							

Array Configuration

The Vision System features an easy to design and install mounting rail system. Mounting rails run in portrait mode, parallel with the short side of the glass and feature integrated wire ways that conceal all conductors and module junction boxes.

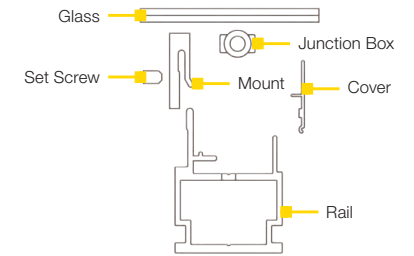
L TYPE



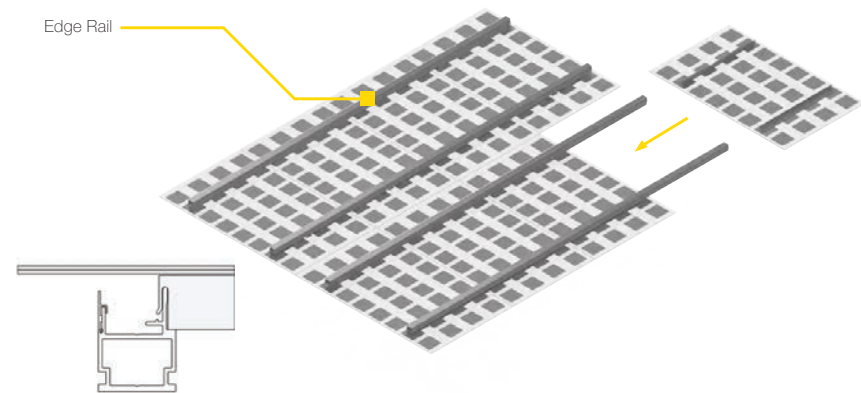
The L Type mounting options include long edge, short edge and corner mounts that create cantilevered glass edges for a floating glass edge at the perimeter of your array. The L Type also includes full perimeter mount options for the interior of the array.

ASSEMBLY

Vision Module System features a simple, adjustable and unique mounting system. Vision modules are mounted to the mounting rail by placing the module anywhere desired along the rail and then tightening with a simple set screw.



S TYPE

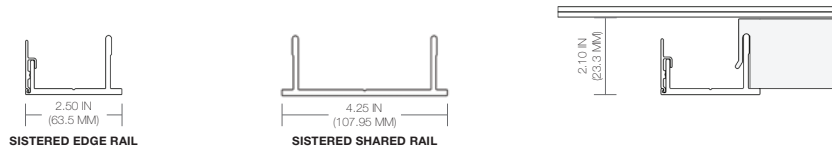


The S Type modules feature interior mounts that provide floating glass edge visible on all sides of the module. The modules are all mounted using Edge Rail meaning there are no shared rails. The S Type modules are ideal for unique installations and mounting configurations.

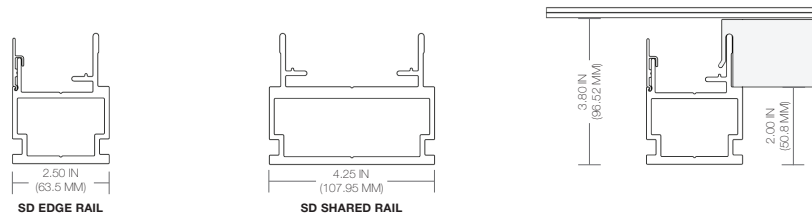
Vision Mounting Rail

The Vision Module System is based on the streamlined integration of the module and mounting rail which results in a super clean and durable installation.

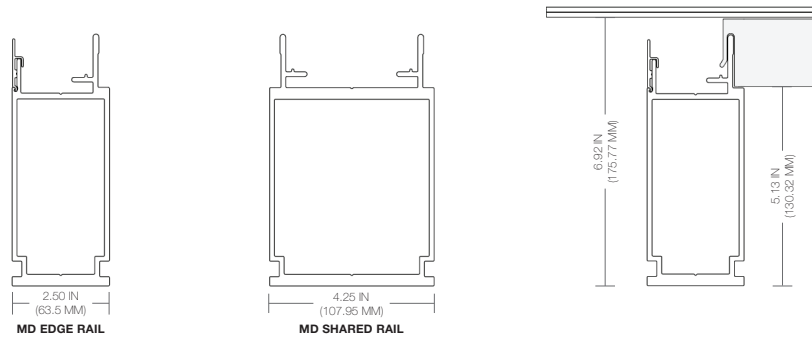
SISTERED RAIL



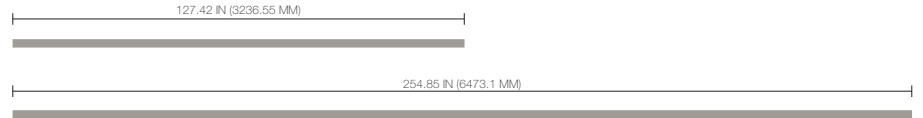
STANDARD DUTY RAIL (SD)



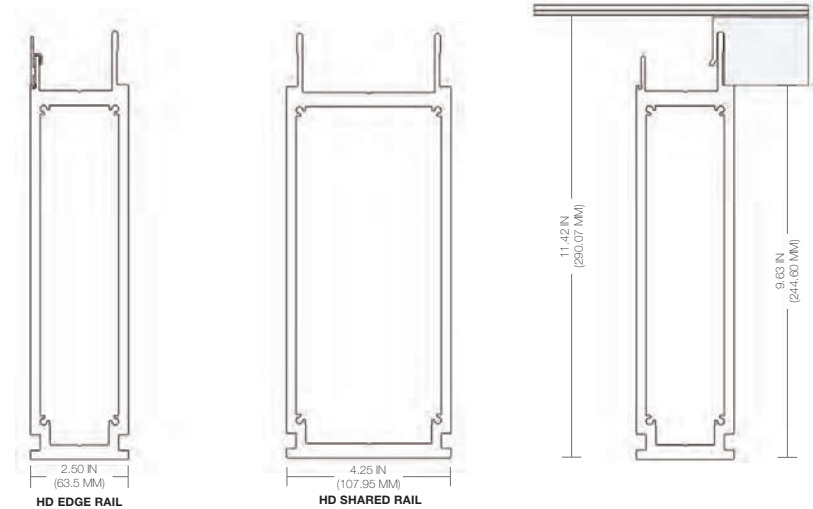
MEDIUM DUTY RAIL (MD)



STANDARD RAIL LENGTHS



HEAVY DUTY RAIL (HD)



TYPICAL RAIL SPANS

			SD	MD	HD
	WIND SPEED (MPH)	SNOW LOAD (PSF)	MAX SPAN (FT)	MAX SPAN (FT)	MAX SPAN (FT)
HONOLULU	110	0	9'3"	20'	29'
LOS ANGELES	110	0	9'3"	20'	28' 6"
ATLANTA	115	5	8'9"	18'6"	26' 6"
DENVER	110	20	7'9"	16'	23'
MIAMI	180	0	7'3"	15'3"	22'
BOSTON	130	40	6'	12'6"	18' 6"

*Refer to engineering letter for project specific rail spans and cantilevers

You Dream It, We Build It

We understand that not every system is a perfect rectangle. The Vision Module System helps solve real world problems with functional solutions. Think outside the box.

WEATHERPROOFING

The Vision Module System can be weatherproofed to create sealed, overhead arrays. There are a range of weatherproofing options in terms of cost, durability and project requirements.

SYSTEM	COLOR	COST	DURABILITY	WARRANTY
3M 7070UV	TRANSPARENT	LOW	GOOD	NA
3M EXTREME SEALING TAPE	OPAQUE	MEDIUM	BETTER	NA
GLAZING	OPAQUE	HIGH	BEST	PROVIDED BY INSTALLER

CUSTOMIZATION

The Vision Module System offers the ability to create custom infill glass modules to allow the integration of non-functional modules to create continuous arrays. Vision custom infill modules can be created in almost any shape and size and incorporate any of the Vision module mounts. Infill panels can be made from polycarbonate, clear glass, frit treatment, or with faux pv cells. Custom infill modules can be used to create "wedges" in curved arrays, provide infill in shaded areas, integrate graphics or logos, create curved edges.

