The Large Array Answer

When you need to design a large array, you can start with a blank sheet of paper and a few volumes of building code … or UniRac can design and specify a U-LA mounting system for you. Using UniRac saves time and provides you with a low cost, quick installing structure that meets code.

Simply visit the U-LA page at www.unirac.com. Download, complete and fax back our U-LA Large PV Array Design Questionnaire. We’ll evaluate your requirements using our proprietary U-LA system design software.

When your design is complete, you’ll receive:

1. a bill of materials for all required U-LA components
2. specifications for installer-supplied materials
3. a dimensional layout of your system
4. a price quote and delivery lead time

This brochure fully illustrates the U-LA and covers the choices raised in the questionnaire. Please call or e-mail us for assistance with any other design concerns.

*SolarMount products are U.S. patent pending.
U-LA mounting systems can be configured for as little as 3 kW to more than a megawatt of PV modules in an integrated, structurally robust, visually attractive array. Whether on the ground or on a large flat roof, a U-LA mounting system is limited only by the size of the array site itself.

U-LA mounting systems can be designed for:
- Landscape or portrait module orientation
- Tilt angles up to 60 degrees
- Winds speeds up to 150 mph (240 kph)
- Seismic Zone 4
- Sloped or irregular topography
- Hard rock to loose soil

Your U-LA system will be as trouble free to install as it is easy to specify. Structural pipes connect with U-bolts, minimizing fabrication on the jobsite. Modules can be mounted to the rails from above or below using mounting slots that accommodate all types of modules. Fabrication on the jobsite is minimized and, if required, is accomplished quickly with standard tools.
Landscape Module Orientation

Used when site layout or array design is optimized with long north-south rows of modules. Generally provides better overall space utilization. Facilitates wiring of long module strings.

Choose landscape mode if you prefer attaching modules to rails before final mounting to the truss structure.

SolarMount Rails

Two SolarMount rails are available – Standard and Heavy Duty. Standard rail keeps costs down on smaller arrays. SolarMount HD rails can be extended up to 25 feet (7.6 meters) with some modules.

Rail Mounting Brackets

Fully adjustable brackets ensure easy installation with no fabrication on the jobsite.
Each U-LA system is custom designed for each installation. Components are sized for specific site requirements, the physical characteristics of the modules, tilt angle specifications, etc. Complete design docu-
mentation is available for evaluation by building departments and/or engineering professionals. All U-LA system components have been destructively tested to confirm that they meet or exceed our design standards. U-LA systems conform to applicable Uniform Building Code standards when installed in accordance with our U-LA installation manual.

**Portrait Module Orientation**

Can simultaneously accommodate high tilt angles and wind loads. Also used when the array must be below a roof parapet. Limited to four modules north/south, depending on tilt angle.

**Module Mounting (Portrait Orientation)**

A single SolarMount rail runs north/south between the long side of the modules and is fastened to both.

Modules attach to a shared bracket using standard module mounting holes. The bracket attaches to the top slot of the rail.

**Portrait Mode U-LA**

**Secure Footings**

Ground mounted U-LAs typically rise from in-ground concrete pillars (see landscape illustration). On roofs or concrete pads, threaded footings secure legs (see portrait illustration). On flat roofs, footings are typically fastened to stringers that run perpendicular to the roof beams.

supplied. For projects requiring the “kitting” of all components by UniRac, we can supply pipe cut to size and, where required, welded and/or threaded.
10 Year Limited Warranty

UniRac, Inc., warrants to the original owner at the original installation site that the U-LA PV Module Mounting System (the “Product”) shall be free from defects in material and workmanship for a period of ten (10) years from the earlier of 1) the date the installation is complete, or 2) 30 days after the purchase of the Product by the original owner. This warranty does not cover damage to the Product that occurs during shipment, or prior to installation.

If within such period the Product shall be reasonably proven to be defective, then UniRac shall repair or replace the defective Product, or part thereof, at UniRac’s sole option. Such repair or replacement shall fulfill all UniRac’s liability with respect to this warranty.

This warranty shall be void if installation of the Product is not performed in accordance with UniRac’s Installation Instructions for the Product, or if the Product has been modified, repaired, or reworked in a manner not authorized by UniRac in writing, or if the Product is installed in an environment for which it was not designed. UniRac shall not be liable for consequential, contingent, or incidental damages arising out of the use of the Product.

UniRac, Inc.
info@unirac.com
3201 University Boulevard SE, Suite 110
Albuquerque NM 87106-5635 USA
505.242.6411
505.242.6412 Fax
Pub 030715.1ds · August 2003
©2003 UniRac, Inc. All rights reserved

PV Module Compatibility List

Call UniRac or your PV dealer for any module not listed.

ASE
ASE300

AstroPower
AP110, AP120, AP150, AP160

BP Solar
3160, 4160, 5170, MSX120, SX110, SX120, SX150

Evergreen
EC94, EC102, EC110

First Solar
FS50D

Kyocera
KC120, KC125G, KC158G, KC167G

Photowatt
PW1250, PW1650

Sanyo
HIT167, HIT175, HIT180 (top mounting only)

Sharp
NE-Q5E2U (165w), NT-S5E1U (185w)

Shell
SM100, SM110, SP130, SP140, SP150

SunWize
SW115, SW120

UniSolar
US64, US116

Building Code Compliance

U-LA mounting systems are designed to comply with the Uniform Building Code, 1997, Chapter 16, when installed in accordance with UniRac’s U-LA installation manual.

U-LA Component Specifications

SolarMount rails, brackets, and cross braces: 6105-T5 aluminum extrusion.

Pipe Connectors and Truss Sliders: Service Condition 4 (very severe) zinc-plated, welded steel.

Fasteners: 304 stainless steel.

Legs and Cross Pipes: ASTM A53B 2-inch or 3-inch Schedule 40 galvanized steel.