Lumeta™
Solar Innovation from California

Technical Note LUMETA/TN-003 PowerPly™ Production Estimation using PVsyst

Using PVsyst to model Lumeta PowerPly Modules

PVsyst is an industry-standard software package used to evaluate PV systems. To enable customer modeling of Lumeta based systems, Lumeta has developed an accurate "pan" model for the PowerPly 400W module (LPP400A). Follow the steps below to add this model to the local database of modules and generate production estimates.

Step 1: Install the Lumeta PowerPly LPP400A module file into the PVSYST module library

a. Download the Lumeta PowerPly .pan file from:
    i. http://www.lumetasolar.com/Pages.aspx/PowerPly
b. Copy the .pan file into the following directory on your computer:
    i. <PVSYST Home directory> Data\ComposPV\PVmodules
c. The file can be verified by using "PVsyst — Tools — PV modules" and will confirm that the LPP400A module is listed at 400Wp

Step 2: Create and evaluate a PVsyst project using the Lumeta PowerPly LPP400A model

a. Create a new Project in PVsyst using standard procedures
b. Insure that the Orientation parameter is adjusted to match the angle at which the Lumeta PowerPly modules will be installed
    i. Standard flat roofs are from 2 to 10 degree slope. Measurements from the actual roof will enable most accurate output simulations. If there is no information, a preliminary estimate of 5 degree slope (1:12) can be used
c. From the System screen, go to the PV Field Detailed Losses screen
    i. When mounting directly on a roof, set the thermal "Constant loss factor Uc" to 21
    ii. If mounting in any other method, contact Lumeta for modeling details
d. Change all other system parameters as your normal methodology recommends (soiling, shading, mismatch, etc)
e. Run PVsyst to generate the energy production estimate