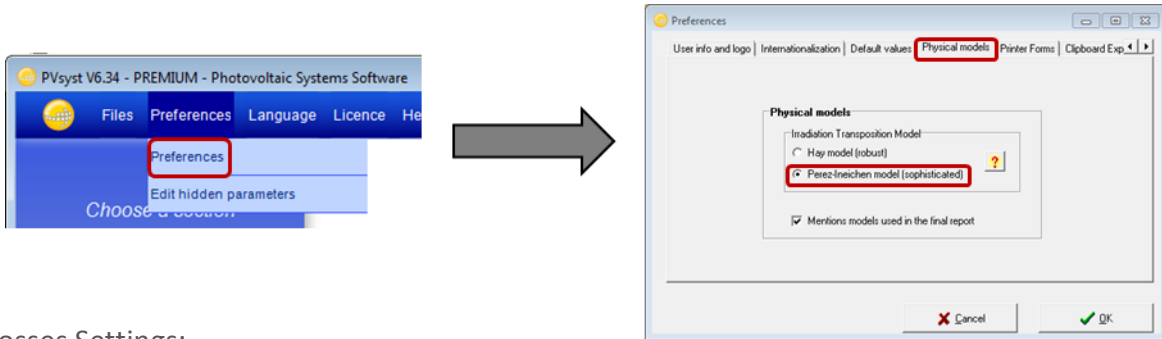


SunPower® Performance Series PVsyst Modeling Guide

SunPower® Performance Series modules design is less susceptible to power loss from shade, debris, and dirt than Conventional Commercial Panels. The guidelines below will ensure the most accurate modeling of the system using P-Series modules.

Preferences: Select the Perez-Ineichen transposition model in Preferences – Physical models



Detailed Losses Settings:

Set the module quality @ **-0.6% (nameplate + 2W)**

P-Series modules are expected to flash at approximately 2W above nameplate, on average.

Set the mismatch losses @ **0.8%**

Research has demonstrated that the voltage mismatch associated with current module tolerance standards ($\pm 5\%$ normal distribution) will result in a loss in system power of approximately 0.5% (Bucciarelli mismatch). Consequently, the SunPower Systems Electrical Engineering group recommends 0.5% for module voltage mismatch loss and 0.3% for string current mismatch, resulting in a total mismatch of 0.8%.

Set the LID (Light-Induced Degradation) loss factor @ **1.2%**

SunPower's P-Series cells experience 1.2% light-induced degradation on average, following the first several hours of sun exposure.

IAM losses: Use the definition of the PV module

Near Shadings Settings: *To reflect the better shade response in PV-Syst, create a shading scene in the Near Shadings section and select the **Linear shadings option**.*

Note: advanced PV-Syst users know that for conventional PV systems, the Detailed, according to Module Layout option yields more accurate results. However, this is not true for SunPower's P-Series modules.

