

# AOPT High Intensity Pulse Solar Simulator

MODEL: AOPT-2007-GEN2

## When 1 sun is not enough.

Alpha-Omega Power Technologies, LLC (AOPT) manufactures systems capable of simulating the sun. Photovoltaic devices are tested using either pulsed or continuous wave (CW) filtered Xenon light. AOPT's GEN2 system is a production ready solar tester, which can test as many as 120 cells per minute. This tester accurately records the current/voltage characteristics for cell sorting, process improvements, and quality control.



Automated Die Testing



Quick IV<sup>®</sup> Software



GEN2 and Prober

### GEN2 Specifications

- 1200 Suns
- 2 Flashes per second
- 15mm x 15mm area
- Class A and B
- Benchtop or Prober Interface

**AOPT** ALPHA-OMEGA  
Power Technologies  
L.L.C. EST. 1997

Alpha-Omega  
Power Technologies, LLC  
Albuquerque, NM 87113  
(505) 341-4828  
www.alphaomegapt.com



Alpha-Omega  
Power Technologies, LLC  
Albuquerque, NM 87199

## High Intensity Pulsed Solar Simulator

# HIGH INTENSITY PULSED SOLAR SIMULATOR GEN 2

### LIGHT CHARACTERISTICS

Pulse Shape	1 ms Pulse Width
Pulse Rate	120 Pulses per minute
Spectrum	AM1.5 spectrum*
* Measured over three bands with less than 1.5% variation over TOP and MIDDLE band The color temperature of this Xenon emission spectrum can be adjusted to achieve a spectrum suitable for terrestrial solar cell testing.	
Intensity	5 – 1000 Suns (1 Sun is 1000 W/m <sup>2</sup> )
Flash Intensity Repeatability	< +/- 2.5%
Temporal Stability	5% over 0.5 ms data acquisition window
Spatial Flux Uniformity	+/- 2.5% over 25mm x 15mm area

### LOAD CHARACTERISTICS

Voltage	0 – 5V
Current	50 mA – 20 A over 4 ranges
Channels	3 Standard Channel Inputs 1 Solar Cell Test Channel Input STANDARD Up to 8 Test Channels OPTIONAL
Accuracy	14-bits Vertical Resolution +/- 0.3% or +/- 20mA or V Which Ever is Greater
Sampling Rate	2500 Pts/ms STANDARD 5000 Pts/ms OPTIONAL
Other	4 quadrant operation Sweep load from High Z to Low Z

### DATA ACQUISITION SYSTEM

The SSDAQ is a high speed data acquisition system for conducting solar cell characterizations with a pulsed solar cell simulator. The system works with Alpha-Omega's High Intensity Pulsed Solar Simulator.

Measurements	Voc, Isc, IV Curve, and Intensity
Displayed Data	Above measurements plus: Jsc, Fill Factor, Efficiency, Intensity corrected data, Power curve, etc.
Data Logging	Data written to user defined location

All product specifications and data are subject to change without notice. Alpha-Omega Power Technologies, LLC, employees, and all persons acting on its behalf (collectively, "AOPT"), disclaims any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of AOPT.