

Now Available!

THE WORLDWIDE SOLAR PANEL ASSEMBLY MARKET

New Opportunities in Outsourcing

**A Strategic Report on the Worldwide Market
for Photovoltaic (PV) Module Assembly,
Including Opportunities for EMS Providers**

Report Highlights

- **Technical Trends**
 - ◆ PV Cell Materials
 - ◆ PV Manufacturing Technology
 - ◆ Recent Developments
- **Market Analysis and Forecasts, 2007–2022**
 - ◆ Technologies
 - ◆ Applications
 - ◆ Regions
 - ◆ OEM Market Share, 2007
 - ◆ Module Production
 - ◆ In-House vs. Outsourced Production
- **Company Profiles**



Electronic Trend Publications

1975 Hamilton Avenue, Suite 6
San Jose, CA 95125
Tel: (408) 369-7000 Fax: (408) 369-8021

A Technology Market Research Company

info@electronictrendpubs.com
www.electronictrendpubs.com

The Worldwide Solar Panel Assembly Market

Synopsis

Electrical power production from solar photovoltaic (PV) systems is experiencing explosive growth that should continue for many years into the future. However, as with any exciting and high-growth market, there is much speculation about the impact and size of this market over time.

Electronic Trend Publications (ETP) in its new report, **The Worldwide Solar Panel Assembly Market**, uses data from a wide variety of sources to present the most realistic picture available regarding the present and future of this market.

The analysis and forecasts are provided in a variety of measures. Application and regional markets are defined in megawatts. Technology markets are defined in megawatts, modules (i.e. panels), cost per module, and cost of goods sold (COGS).

COGS—the total manufacturing cost to produce PV cells and finished modules—is forecast instead of revenue for two reasons. First, COGS is the key measurement for manufacturers, materials suppliers, and equipment makers who wish to participate in this market. Second, manufacturing cost is much more predictable than revenue. In a capital intensive industry such as PV cell manufacturing, revenue often swings wildly as supply and demand move in and out of balance.

This report also forecasts the move by PV cell and module manufacturers to outsource production to electronics manufacturing services (EMS) providers. The outsourcing forecast is defined in megawatts, modules, cost per module, and COGS.

This report is organized into six chapters. Chapter 1, “Introduction,” outlines the scope, organization, and methodology for the report.

Chapter 2, “Executive Summary,” presents top-level data from throughout the report.

Chapter 3, “Technical Trends,” examines the basis for PV electronics, reviews the fundamental materials science behind basic PV cells, and looks at some of the emerging PV technologies. This chapter also contains a brief compendium of recent news articles about the industry.

Chapter 4, “Market Analysis, 2007,” defines the leading technologies, applications, and regions for PV electronics. The chapter quantifies—insofar as is possible—the current market in terms of megawatts shipped, modules shipped, average cost per module, and cost of goods sold.

Chapter 5, “Market Forecast, 2008–2022” examines how the market for PV electronics is expected to grow by leading application area. As in Chapter 4, this chapter defines the leading technologies, applications, and regions. This chapter also forecasts how the EMS industry is expected to play an expanding role in the PV market.

Chapter 6, “Company Profiles,” reviews the products and strategies of the leading industry PV manufacturers. Profiles are also provided for some promising startup companies, as well as a number of material and production equipment providers.

The Worldwide Solar Panel Assembly Market will provide you with an effective and economical tool for assessing the future of this market. Please take a few moments to review the report's outline on the following pages. The report is available in electronic format only and is delivered by email as a single-user PDF file. The report sells for \$1995, with extra single-user licenses at \$350 each. Corporate licensing is available—contact us for pricing.

About the Author

Randall Sherman, president of New Venture Research Corp. a California market research and business consulting firm focused on the EMS and OEM electronics manufacturing industries, continues to serve as principal analyst for this report. Mr. Sherman has more than 20 years' experience in technology and business research. He began his career as a telecom network design engineer. He has held senior positions at various market research firms including Creative Strategies and Frost and Sullivan. Mr. Sherman holds an MSEE from the University of Colorado and an MBA from Edinburgh School of Business.

The Worldwide Solar Panel Assembly Market

Table of Contents

Chapter 1: Introduction

- Objectives
- Organization
- Assumptions
- Methodology

Chapter 2: Executive Summary

Chapter 3: Technical Trends

- PV Cell Materials
 - Crystalline Silicon Solar Cells
 - Thin Film Solar Cells
 - Other Solar Cells
- PV Manufacturing Technology
 - Silicon Crystal Growing or Casting Plants
 - PV Cell Plants
 - Module Assembly Plants
 - System Assembly
- Recent PV Technology Developments

Chapter 4: Market Analysis, 2007

- Overview
- Technology Markets
 - Silicon/Poly-Silicon
 - Thin Films
 - Other Technologies
- Application Markets
 - Remote Industrial
 - Remote Habitation
 - Consumer Power
 - Grid-Residential
 - Grid-Industrial
 - Grid-Utility
- Regional Markets
 - Germany
 - Japan
 - United States
 - China
 - Rest of Europe
 - Rest of Asia
 - Rest of Americas
 - Africa
 - Rest of World
- OEM Market Share
- Module Production
- In-House vs. Outsourced Production

Chapter 5: Market Forecast, 2008–2022

- Technology Markets
- Application Markets
- Regional Markets
- Module Production
 - Units
 - Watts per Module
 - Cost per Module
 - COGS
 - Cost per Watt
- In-House vs. Outsourced Production
- Market Summary

Chapter 6: Company Profiles

Applied Materials	Miasolé
Ascent Solar	MEMC Electronic
Technologies	Materials
AVANCIS	Mitsubishi Electric
BP Solar	Motech
Canadian Solar	Nanosolar
China Sunergy	Photovoltech
Conergy AG	Photowatt
CMC Magnetics	Technologies
ENTECH, Inc.	Q-Cells AG
ersol Solar Energy	REC Solar
ET Solar	SANYO Electric
Evergreen Solar	Schott Solar
EverQ	Sharp Solar
First Solar, Inc.	Solar Semiconductor
Gamesa Corporation	Solarfun
HelioVolt	SolarWorld AG
Innovalight	SoloPower
Isofoton	Solon AG
JA Solar	SunPower Corp
Kaneka Silicon PV	Suntech Power
Konarka	Tatung Corporation
Technologies	Trina Solar
Kyocera Solar, Inc.	XsunX
LDK Solar Co., Ltd	Yingli Green Energy

The Worldwide Solar Panel Assembly Market

Table of Contents (continued)

List of Figures and Tables

Worldwide PV Market—Megawatts by Technology, 2002 & 2007	Worldwide PV Market—Module Production, 2007–2012, 2017, 2022
Worldwide PV Market—COGS by Technology, 2002 & 2007	Worldwide PV Market—Watts per Module, 2007–2012, 2017, 2022
Worldwide PV Market—Megawatts by Application, 2002 & 2007	Worldwide PV Market—Cost per Module, 2007–2012, 2017, 2022
Worldwide PV Market—COGS by Application, 2002 & 2007	Worldwide PV Market—COGS, 2007–2012, 2017, 2022
Worldwide PV Market—Megawatts by Region, 2002 & 2007	Worldwide PV Market—Cost per Watt, 2007–2012, 2017, 2022
Worldwide PV Market—COGS by Region, 2002 & 2007	Worldwide PV Market—In-House and Outsourced Megawatts, 2007–2012, 2017, 2022
Worldwide PV Market—COGS, Megawatts, and Modules Assembled by Company, 2007	Worldwide PV Market—In-House and Outsourced Modules, 2007–2012, 2017, 2022
Worldwide PV Module Market—Units, 2002 & 2007	Worldwide PV Market—In-House and Outsourced Cost per Module, 2007–2012, 2017, 2022
Worldwide PV Module Market—CPM, 2002 & 2007	Worldwide PV Market—In-House and Outsourced COGS, 2007–2012, 2017, 2022
Worldwide PV Module Market—COGS, 2002 & 2007	Worldwide PV Market—In-House Summary, 2007–2012, 2017, 2022
Worldwide PV Module Market—In-House and Outsourced, 2002 & 2007	Worldwide PV Market—Outsourced Summary, 2007–2012, 2017, 2022
Worldwide PV Market—Megawatts by Technology, 2007–2012, 2017, 2022	Worldwide PV Market—Total Market Summary, 2007–2012, 2017, 2022
Worldwide PV Market—Megawatts by Application, 2007–2012, 2017, 2022	
Worldwide PV Market—Megawatts by Region, 2007–2012, 2017, 2022	

Published March 2008, 150 Pages

Order Form

Payment Method

Check in the amount of \$ _____ is enclosed.

Invoice per P.O. # _____

Please charge: Visa MasterCard American Express

Card # _____ Exp. _____

Name On Card _____

Signature _____ Date _____

Name _____

Title _____

Company _____

Address _____

City/State/Zip _____

Telephone _____

Fax _____

E-mail _____

The Worldwide Solar Panel Assembly Market (Single-User PDF File)	\$1995
Extra Single-User Licenses (\$350 each)	
	Subtotal
	TOTAL

Returns: No return privileges. **International Orders:** Must be prepaid, please contact us for payment arrangements.

Electronic Trend Publications

1975 Hamilton Ave., Suite 6
 San Jose, CA 95125
 Tel: (408) 369-7000 Fax: (408) 369-8021
 www.electronictrendpubs.com