

# Global Thin-Film Solar Cell Market: Size, Trends & Forecasts (2022-2026 Edition)

<https://marketpublishers.com/r/G05823350BCFEN.html>

Date: January 2022

Pages: 63

Price: US\$ 850.00 (Single User License)

ID: G05823350BCFEN

## Abstracts

### Scope of the Report

The report titled “Global Thin-Film Solar Cell Market: Size, Trends and Forecasts (2022-2026 Edition)”, provides an in depth analysis of the global thin-film solar cell market by value, by technology type, by end user, by region, etc. The report also provides a regional analysis of the thin-film solar cell market, including the following regions: Europe (UK & Rest of Europe), North America, Asia Pacific, and ROW. The report also provides a detailed analysis of the UK thin-film solar cell market by value and by end user.

The report also assesses the key opportunities in the market and outlines the factors that are and will be driving the growth of the industry. Growth of the overall global thin-film solar cell market has also been forecasted for the period 2022-2026, taking into consideration the previous growth patterns, the growth drivers and the current and future trends.

The global thin-film solar cell market is fragmented with many market players operating worldwide. Some thin-film solar cell market players operate on a local level while other players operate on a regional and global level. Further, key players of the thin-film solar cell market are First Solar, Inc., Ascent solar Technologies, Inc., Oxford Photovoltaics Limited, Showa Shell Sekiyu K.K. (Solar Frontier K.K.) are also profiled with their financial information and respective business strategies.

### Country Coverage

#### Europe

North America

Asia Pacific

ROW

## Company Coverage

First Solar, Inc.

Ascent solar Technologies, Inc.

Oxford Photovoltaics Limited

Showa Shell Sekiyu K.K. (Solar Frontier K.K.)

## Executive Summary

Solar cell, also called photovoltaic cell, is a semi-conductor device that converts the light energy into the electrical energy by using the principle of photovoltaic (PV) effect. Solar cells can be broadly categorized into two type of technologies: Crystalline Si based Technology and Thin-Film based Technology.

The thin-film solar cells are referred to as second generation of solar cells, made by using several light-absorbing layers of photovoltaic materials. The thickness of thin-film layers can be about 300-350 times smaller than that of a standard silicon panel. The thin-film solar cells are considered flexible, easy to handle, lightweight, and cheaper to produce. They can be installed easily. The thin-film solar cells contain very less quantity of silicon, therefore the emission caused during their production is very low.

Thin-film solar cells have gained popularity in different industrial verticals. The major applications of thin-film solar cells are: institutional and commercial buildings with large rooftops, solar farms, forest areas, rooftop of buses, and large-sized water tanks to supply power for pumping water.

Thin-film solar cells have a long history with continuous technological developments. The thin-film solar cell market can be segmented on the basis of technology type

(Cadmium Telluride (CdTe), Copper Indium Gallium Diselenide (CIGS), and Amorphous Silicon (A-Si)); installation (On-Grid, and Off-Grid); and End User (Residential, Commercial, and Utility).

The global thin-film solar cell market has increased significantly during the years 2020-2021 and projections are made that the market would rise in the next four years i.e. 2022-2026 tremendously. The thin-film solar cell market is expected to increase due to increasing demand for electricity, rising solar photovoltaic (PV) installed capacity, declining solar prices, growing use of renewable energy, integration of thin-film solar cells in electric vehicles, technological advancements associated with the thin-film solar cells, etc. Yet the market faces some challenges such as high installation cost, introduction of third generation solar cells, etc.

## Contents

### 1. EXECUTIVE SUMMARY

### 2. INTRODUCTION

#### 2.1 Solar Cell: An Overview

##### 2.1.1 History of Solar Cell

##### 2.1.2 Solar Cell Technologies

#### 2.2 Thin-Film Solar Cell: An Overview

##### 2.2.1 Working of Thin-Film Solar Cell

##### 2.2.2 Features of Thin-Film Solar Cell

##### 2.2.3 Applications of Thin-Film Solar Cell

#### 2.3 Thin-Film Solar Cell Segmentation: An Overview

##### 2.3.1 Thin-Film Solar Cell Segmentation by Technology Type

##### 2.3.2 Thin-Film Solar Cell Segmentation by Installation and End User

### 3. GLOBAL MARKET ANALYSIS

#### 3.1 Global Thin-Film Solar Cell Market: An Analysis

##### 3.1.1 Global Thin-film Solar Cell Market by Value

##### 3.1.2 Global Thin-film Solar Cell Market by Technology Type (Copper Indium Gallium Diselenide (CIGS), Cadmium Telluride (CdTe), and Amorphous Silicon (A-Si))

##### 3.1.3 Global Thin-film Solar Cell Market by End User (Utility, Commercial, and Residential)

##### 3.1.4 Global Thin-film Solar Cell Market by Region (Europe, North America, Asia Pacific, and ROW)

#### 3.2 Global Thin-Film Solar Cell Market: Technology Type Analysis

##### 3.2.1 Global Copper Indium Gallium Diselenide (CIGS) Thin-Film Solar Cell Market by Value

##### 3.2.2 Global Cadmium Telluride (CdTe)Thin-Film Solar Cell Market by Value

##### 3.2.3 Global Amorphous Silicon (A-Si) Thin-Film Solar Cell Market by Value

#### 3.3 Global Thin-Film Solar Cell Market: End User Analysis

##### 3.3.1 Global Residential Thin-Film Solar Cell Market by Value

##### 3.3.2 Global Commercial Thin-Film Solar Cell Market by Value

##### 3.3.3 Global Utility Thin-Film Solar Cell Market by Value

### 4. REGIONAL MARKET ANALYSIS

#### 4.1 Europe Thin-Film Solar Cell Market: An Analysis

##### 4.1.1 Europe Thin-Film Solar Cell Market by Value

##### 4.1.2 Europe Thin-Film Solar Cell Market by Region (UK, and Rest of Europe)

##### 4.1.3 UK Thin-Film Solar Cell Market by Value

##### 4.1.4 UK Thin-Film Solar Cell Market by End User (Utility, Residential, and Commercial)

##### 4.1.5 UK Residential Thin-Film Solar Cell Market by Value

##### 4.1.6 UK Commercial Thin-Film Solar Cell Market by Value

##### 4.1.7 UK Utility Thin-Film Solar Cell Market by Value

##### 4.1.8 Rest of Europe Thin-Film Solar Cell Market by Value

#### 4.2 North America Thin-Film Solar Cell Market: An Analysis

##### 4.2.1 North America Thin-Film Solar Cell Market by Value

#### 4.3 Asia Pacific Thin-Film Solar Cell Market: An Analysis

##### 4.3.1 Asia Pacific Thin-Film Solar Cell Market by Value

#### 4.4 ROW Thin-Film Solar Cell Market: An Analysis

##### 4.4.1 ROW Thin-Film Solar Cell Market by Value

### 5. MARKET DYNAMICS

#### 5.1 Growth Driver

##### 5.1.1 Increasing Demand for Electricity

##### 5.1.2 Rising Solar Photovoltaic (PV) Installed Capacity

##### 5.1.3 Declining Solar Prices

##### 5.1.4 Growing Use of Renewable Energy

##### 5.1.5 Integration of Thin-Film Solar Cells in Electric Vehicles

##### 5.1.6 Technological Advancements Associated with the Thin-Film Solar Cells

#### 5.2 Challenges

##### 5.2.1 High Installation Cost

##### 5.2.2 Introduction of Third Generation Solar Cells

#### 5.3 Market Trends

##### 5.3.1 Increasing Awareness Towards Green Energy

##### 5.3.2 Growing Popularity of CIGS Technology

##### 5.3.3 Rising Preference of Off-Grid Electrification

### 6. COMPETITIVE LANDSCAPE

#### 6.1 Global Thin-Film Solar Cell Market Players by Product Types

### 7. COMPANY PROFILES

- 7.1 First Solar, Inc.
  - 7.1.1 Business Overview
  - 7.1.2 Business Strategy
- 7.2 Ascent Solar Technologies, Inc.
  - 7.2.1 Business Overview
  - 7.2.2 Business Strategy
- 7.3 Oxford Photovoltaics Limited
  - 7.3.1 Business Overview
  - 7.3.2 Business Strategy
- 7.4 Showa Shell Sekiyu K.K. (Solar Frontier K.K.)
  - 7.4.1 Business Overview
  - 7.4.2 Business Strategy

## List Of Figures

### LIST OF FIGURES

Figure 1: History of Solar Cell

Figure 2: Solar Cell Technologies

Figure 3: Features of Thin-Film Solar Cell

Figure 4: Applications of Thin-Film Solar Cell

Figure 5: Thin-Film Solar Cell Segmentation by Technology Type

Figure 6: Thin-Film Solar Cell Segmentation by Installation and End User

Figure 7: Global Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 8: Global Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 9: Global Thin-Film Solar Cell Market by Technology Type; 2021 (Percentage, %)

Figure 10: Global Thin-Film Solar Cell Market by End User ; 2021 (Percentage, %)

Figure 11: Global Thin-Film Solar Cell Market by Region; 2021 (Percentage, %)

Figure 12: Global CIGS Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 13: Global CIGS Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 14: Global CdTe Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 15: Global CdTe Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 16: Global A-Si Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 17: Global A-Si Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 18: Global Residential Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 19: Global Residential Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 20: Global Commercial Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 21: Global Commercial Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 22: Global Utility Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 23: Global Utility Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 24: Europe Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 25: Europe Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 26: Europe Thin-Film Solar Cell Market by Region; 2021 (Percentage %)

Figure 27: UK Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 28: UK Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 29: UK Thin-Film Solar Cell Market by End User; 2021 (Percentage %)

Figure 30: UK Residential Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Million)

Figure 31: UK Residential Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Million)

Figure 32: UK Commercial Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Million)

Figure 33: UK Commercial Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Million)

Figure 34: UK Utility Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Million)

Figure 35: UK Utility Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 36: Rest of Europe Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 37: Rest of Europe Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 38: North America Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 39: North America Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 40: Asia Pacific Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 41: Asia Pacific Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 42: ROW Thin-Film Solar Cell Market by Value; 2019-2021 (US\$ Billion)

Figure 43: ROW Thin-Film Solar Cell Market by Value; 2022-2026 (US\$ Billion)

Figure 44: Global Electricity Demand; 2015-2040 (Thousand TWh)

Figure 45: Global Cumulative Installed Solar Photovoltaic (PV) Capacity; 2010-2030 (GW)

Figure 46: The US Average Solar Photovoltaic (PV) Prices; 2012-2021 (US\$/Watt)

Figure 47: Global Renewable Energy Generation; 2015-2021 (Terawatt-hour)

Figure 48: Global Battery Electric Vehicle (BEV) Deployment by Region; 2018-2021 (Million)

Figure 49: Global Plug-in Hybrid Electric Vehicle (PHEV) Deployment by Region; 2018-2021 (Million)

Table 1: Global Thin-Film Solar Cell Market Players by Product Types



## I would like to order

Product name: Global Thin-Film Solar Cell Market: Size, Trends & Forecasts (2022-2026 Edition)

Product link: <https://marketpublishers.com/r/G05823350BCFEN.html>

Price: US\$ 850.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/G05823350BCFEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970