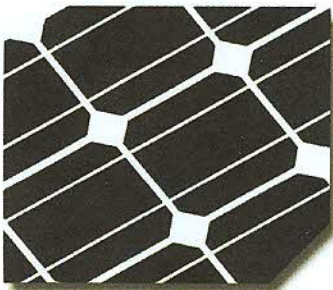




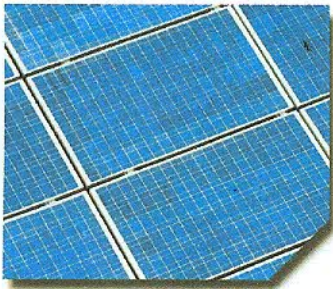
# SURYA UTAMA PUTRA

SURYA UTAMA PUTRA

## PANEL SURYA



Panel surya adalah alat yang terdiri dari sel - sel surya yang mengubah cahaya matahari menjadi listrik searah (DC). Sel - sel surya tersebut disambung secara seri. Sel bagian atas dilindungi oleh lapisan Polymer Resin (EVA) dan kaca (Solar Glass). Sedangkan sel bagian bawah dilindungi oleh lapisan Polymer Resin (EVA) dan Poly Ethylen Terephthalate (Backsheet). Panel surya ini menggunakan rangka aluminium dengan design yang kuat dan tahan lama agar dapat bertahan pada cuaca ekstrim.



Dalam 1 [satu] unit panel surya dipasang beberapa dioda peningkat [bypass diode] untuk melindungi panel dari efek bayangan yang mana dapat menyebabkan sel surya menjadi panas dan akan rusak bila terjadi secara berkepanjangan. Efek bayangan dapat terjadi akibat dari dahan pohon, kotoran, awan, debu, dan lain - lain.

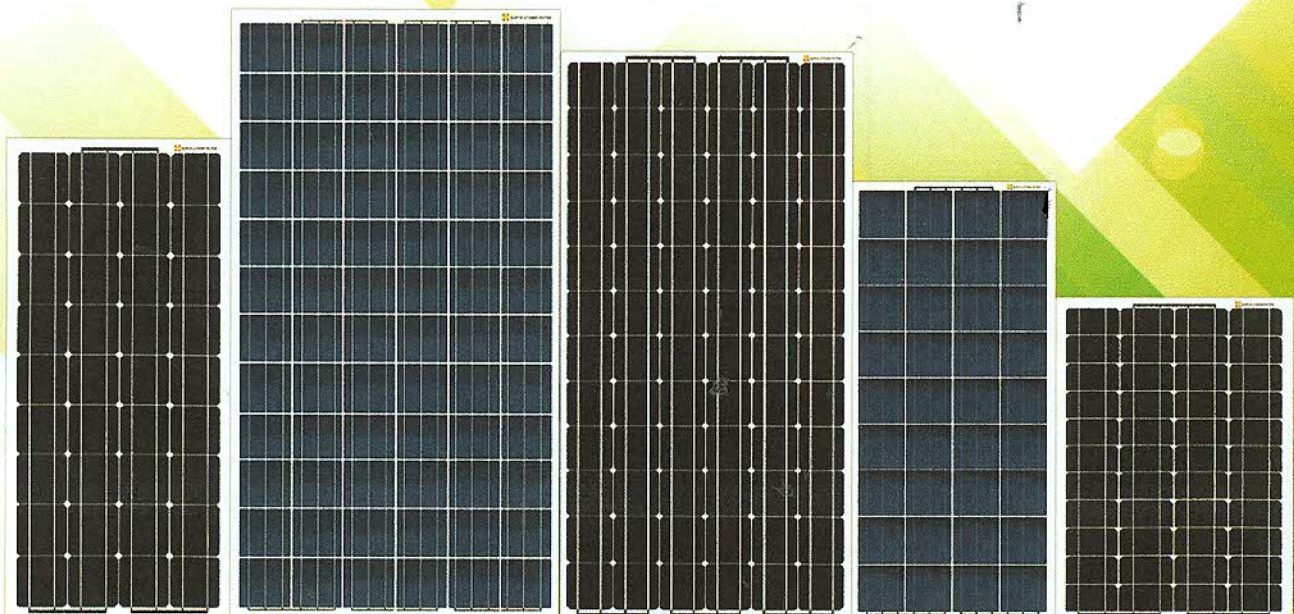
Keuntungan menggunakan panel surya :

1. Sumber energi yang tidak pernah habis.
2. Bersih dan ramah lingkungan.
3. Umur pemakaian panel surya panjang.
4. Anti karat dan korosi.
5. Instalasi mudah dan cepat.



SURYA UTAMA PUTRA

Panel surya dapat diaplikasikan untuk penerangan rumah, jalan umum, lampu taman, lampu iklan, kamera CCTV, WiFi, radio pemancar, tanda navigasi, perangkat telekomunikasi, stasiun cuaca dan sistem pendingin obat - obatan di puskesmas, dan lain - lain.





# SUPSM-80



## Karakteristik Kelistrikan

|                                 |             |
|---------------------------------|-------------|
| Daya Maksimal (Pm)              | 80 W        |
| Toleransi Daya $\pm 3\%$        | $\pm 3\%$   |
| Tegangan Maksimal (Vpm)         | 18.64 Volt  |
| Arus Maksimal (Ipm)             | 4.29 Ampere |
| Tegangan Hubungan Terbuka (Voc) | 22.70 Volt  |
| Arus Hubungan Singkat (Isc)     | 4.49 Ampere |
| Tegangan Maksimal Sistem        | 1000 VDCmax |
| Efisiensi Panel Surya           | 15.05 %     |

## Karakteristik Mekanik

|                                 |         |
|---------------------------------|---------|
| Panjang ( B )                   | 782 mm  |
| Lebar ( A )                     | 689 mm  |
| Tebal (mm)                      | 35 mm   |
| Lubang Pada frame Panjang ( E ) | 406 mm  |
| Lubang Pada frame Panjang ( D ) | 639 mm  |
| Berat                           | 6.53 Kg |

## Karakteristik Sel

|               |                                      |
|---------------|--------------------------------------|
| Tipe Sel      | Mono - Crystalline Silicon           |
| Ukuran Sel    | 156mm x 78mm                         |
| Bentuk Sel    | Potongan 1/2 sel utuh                |
| Jumlah Sel    | 36 rangkaian seri                    |
| Efisiensi Sel | 15.5%                                |
| Ketebalan Sel | 200 $\mu\text{m}$ > 30 $\mu\text{m}$ |

## Koefisien Temperatur

|                                                |                |
|------------------------------------------------|----------------|
| Koefisien Temperatur Tegangan Hubungan Terbuka | - 0.24 % / °C  |
| Koefisien Temperatur Arus Hubungan Singkat     | + 0.033 % / °C |
| Koefisien Temperatur Daya                      | - 0.37 % / °C  |

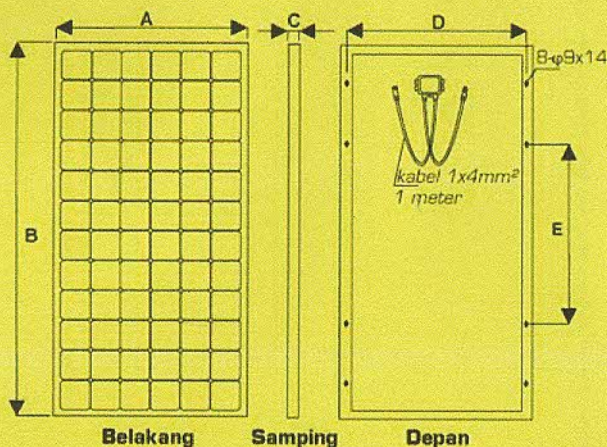
## Karakteristik Kaca

Anti Reflexion Low Iron Tempered Glass  
Ketebalan 3.2 mm

## Kondisi Standar Pengujian

|             |                         |
|-------------|-------------------------|
| AM          | 1.5                     |
| Pencahayaan | 1000 W / m <sup>2</sup> |
| Temperatur  | - 40 °C to + 85 °C      |

## Gambar dan Ukuran Panel



## Sertifikasi

Produk ini telah diuji berdasarkan SNI  
No.04-3850.2-1995 (B2TE - BPPT)

## Informasi Dealer :



Dalam rangka peningkatan kualitas, Spesifikasi dapat berubah tanpa pemberitahuan sebelumnya.

## PT. SURYA UTAMA PUTRA

Nowl Building  
Jl. Raya Bandung - Garut KM 23  
Rancaekek, Kab. Bandung 40394  
Telp. (62-22) 7798316 (Hunting)  
Fax. (62-22) 7792082  
Jawa Barat - Indonesia  
www.suryautamaputra.com  
marketing@suryautamaputra.com



FM 560476 / ISO 9001 : 2008  
EMS 584032 / ISO 14001 : 2004  
OHS 617919 / ISO 18001 : 2007



**bsi.**



# Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2008

This is to certify that:

PT Surya Utama Putra  
Jl. Raya Bandung - Garut Km 23  
Bandung 40394  
Indonesia

Holds Certificate No: **FM 560476**

and operates a Quality Management System which complies with the requirements of ISO 9001:2008 for the following scope:

The manufacture of solar modules

For and on behalf of BSI:

Gary Fenton, Global Assurance Director

Originally registered: 16/07/2010

Latest Issue: 15/02/2013

Expiry Date: 15/07/2016



Page: 1 of 2

...making excellence a habit.™

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.

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Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organization.

This certificate is valid only if provided original copies are in complete set.

Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 845 080 9000  
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.  
A Member of the BSI Group of Companies.



SURYA UTAMA PUTRA

Certificate No: FM 560476

*Location*

*Registered Activities*

PT Surya Utama Putra  
Jl. Raya Bandung - Garut Km 23  
Bandung 40394  
Indonesia

Manufacture of solar modules

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