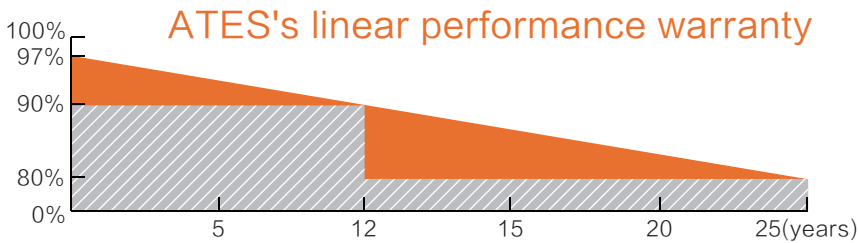
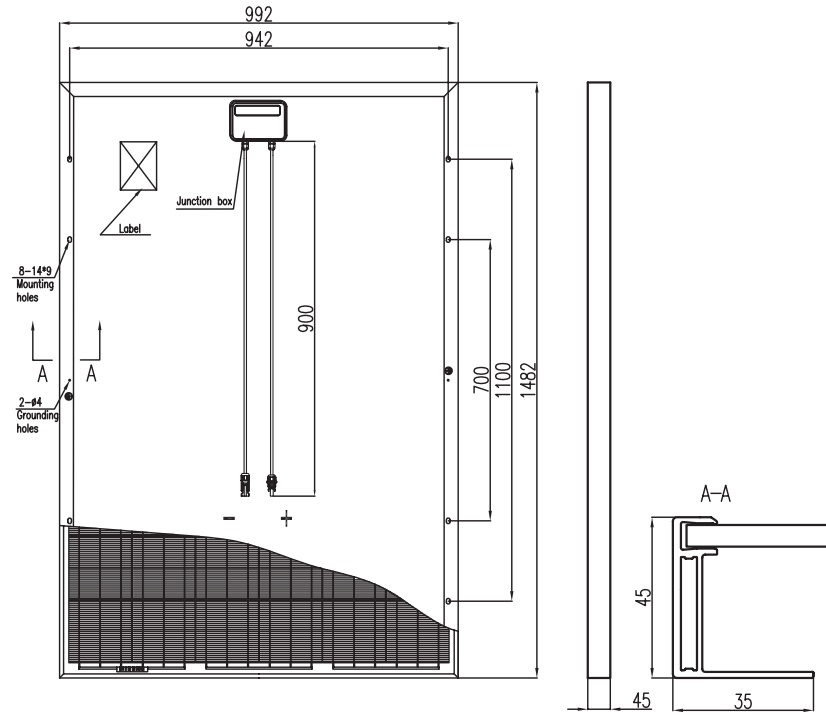


# AT220P-54

- AT210P-54
- AT215P-54
- AT225P-54
- AT230P-54



**10** Years  
Material & Craft  
**Quality assurance**

**12** Years  
90% output  
**Power guarantee**

**25** Years  
80% output  
**Power guarantee**



ISO9001:BSI  
ISO14001:BSI  
OHSAS18001:BSI



High Module Efficiency



Mechanical Load Capability up to 8000 Pa



Salt Mist Corrosion Protect  
Ammonia Resistance



Potential Induced Degradation Free

ATES Inc

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 WEB: <http://www.ates-jp.com> E-MAIL: [solar@ates-jp.com](mailto:solar@ates-jp.com)  
 ADD : KY Tokiwacho Bld.7F,Tokiwacho 2-11,Naka-ku,Yokohuma 231-0014,JAPAN

# AT220P-54

- AT210P-54
- AT215P-54
- AT225P-54
- AT230P-54

# ATES

Beyond Perfection

## Electrical Characteristics

|  | TYPE                                      | AT 210P-54 | AT 215P-54 | AT 220P-54 | AT 225P-54 | AT 230P-54 |
|--|---|------------|------------|------------|------------|------------|
| STC<br>1000W/M <sup>2</sup><br>Module<br>Temperature<br>25°C<br>A.M.1.5      | POWER OUTPUT                              | 210        | 215        | 220        | 225        | 230        |
|  | MAX POWER TOLERANCE                       | 0-5W       | 0-5W       | 0-5W       | 0-5W       | 0-5W       |
|  | MODULE EFFICIENCY (%)                     | 14.3       | 14.6       | 15.0       | 15.3       | 15.6       |
|  | VOLTAGE MPP V <sub>mpp</sub>              | 26.3       | 26.5       | 26.8       | 27.1       | 27.3       |
|  | CURRENT MPP I <sub>mp</sub> (A)           | 7.99       | 8.10       | 8.21       | 8.31       | 8.42       |
|  | VOLTAGE OPEN CIRCUIT V <sub>oc</sub>      | 33.3       | 33.3       | 33.6       | 33.8       | 33.9       |
|  | SHORT CIRCUIT CURRENT I <sub>sc</sub> (A) | 8.48       | 8.57       | 8.68       | 8.79       | 8.92       |
| NOCT<br>800W/M <sup>2</sup><br>Environment<br>Temperature<br>20°C<br>A.M.1.5 | POWER OUTPUT                              | 159.0      | 162.8      | 166.6      | 170.4      | 174.2      |
|  | VOLTAGE MPP V <sub>mpp</sub> (V)          | 24.0       | 24.2       | 24.4       | 24.7       | 24.9       |
|  | CURRENT MPP I <sub>mp</sub> (A)           | 6.64       | 6.73       | 6.82       | 6.91       | 6.99       |
|  | VOLTAGE OPEN CIRCUIT V <sub>oc</sub> (V)  | 30.2       | 30.2       | 30.5       | 30.7       | 30.8       |
|  | SHORT CIRCUIT CURRENT I <sub>sc</sub> (A) | 7.27       | 7.34       | 7.44       | 7.53       | 7.64       |
| TEMPERATURE COEFFICIENTS I <sub>sc</sub> (% / °C)                            |   |            |            | 0.088      |            |            |
| TEMPERATURE COEFFICIENTS V <sub>oc</sub> (% / °C)                            |   |            |            | -0.352     |            |            |
| TEMPERATURE COEFFICIENTS P <sub>mpp</sub> (% / °C)                           |   |            |            | -0.442     |            |            |
| NOCT (°C)  |   |            |            | 45±2°C     |            |            |

## Mechanical Data

|                      |                                |
|----------------------|--------------------------------|
| DIMENSIONS OF MODULE | 1482*992*45mm                  |
| WEIGHT(Kg)           | 17.0                           |
| CABLE                | TUV Certified 4mm <sup>2</sup> |
| GLASS                | High transmission glass 3.2mm  |
| JUNCTION BOX         | 3 Bypass-Diode                 |
| TYPE OF CONNECTOR    | Compatible with MC 4 plug      |

## Packaging Configuration

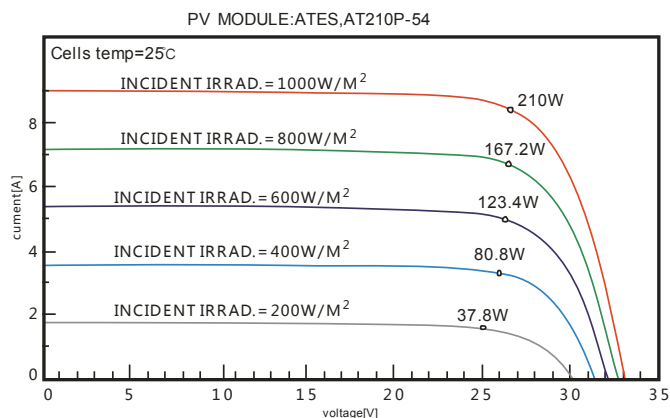
|                  |              |
|------------------|--------------|
| Loading Capacity | 216 pcs/20GP |
|                  | 624 pcs/40HC |

Contact Information

## Working Conditions

|                            |         |
|----------------------------|---------|
| MAX SYSTEM VOLTAGE (VDC)   | 1000V   |
| SERIES FUSE RATING         | 15A     |
| MECHANICAL LOAD            | ≥5400Pa |
| OPERATING TEMPERATURE (°C) | -40~+85 |
| APPLICATION CLASS          | A       |

## I-V CURVES



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ISO 9001: 06515Q21080R0S IEC 61215, 61730

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