ELDORA GRAND ULTIMA SILVER SERIES

- **Higher Output of Module Power**: by reducing cell to module power loss
- Designed for very **High Area Efficiency** ideally suited for roof-top and ground-mounted applications
- Extremely **Narrow Power Binning Tolerance** of +2.5 Wp to reduce current mismatch loss in single string
- **Extremely Reliable Product** suiting harsh environment conditions withstanding 2400Pa Wind load, 5400Pa Snow load
- Engineered to provide **Excellent Low Light Response**

**72 Cells Polycrystalline**

**Upto 17.55% Efficiency**

**320-340 W Range**

**Quality and Safety**
- 27 years of linear power output warranty **
- Rigorous quality control meeting the highest international standards
- 100% EL tested to minimise micro crack
- Excellent anti-PID performance
- Certified for salt mist corrosion resistance – severity VI
- Certified for ammonia resistance
- Certified for sand and dust test

**Applications**
- On-grid large scale utility systems
- On-grid rooftop residential, commercial and industrial roof top installations
- Off-grid residential systems
- Solar pumping applications

ELDORA VSP.72.AAA.03.04 | Polycrystalline Solar PV Modules | 72 Cells | 320-340 Watt
TECHNICAL DATA

ELDORA GRAND ULTIMA SILVER SERIES

THIS DATASHEET IS APPLICABLE FOR: ELDORA VSP.72.AAA.03.04 (AAA=320-340)

### Electrical Data1,2

All Data refers to STC

<table>
<thead>
<tr>
<th>Peak Power P_{max} (Wp)</th>
<th>320</th>
<th>322.5</th>
<th>325</th>
<th>327.5</th>
<th>330</th>
<th>332.5</th>
<th>335</th>
<th>337.5</th>
<th>340</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Voltage V_{max} (V)</td>
<td>37.7</td>
<td>37.7</td>
<td>37.8</td>
<td>37.9</td>
<td>38</td>
<td>38.1</td>
<td>38.1</td>
<td>38.1</td>
<td>38.2</td>
</tr>
<tr>
<td>Maximum Current I_{max} (A)</td>
<td>8.5</td>
<td>8.55</td>
<td>8.61</td>
<td>8.65</td>
<td>8.7</td>
<td>8.74</td>
<td>8.8</td>
<td>8.86</td>
<td>8.91</td>
</tr>
<tr>
<td>Open Circuit Voltage V_{oc} (V)</td>
<td>46</td>
<td>46.1</td>
<td>46.2</td>
<td>46.2</td>
<td>46.3</td>
<td>46.4</td>
<td>46.5</td>
<td>46.6</td>
<td>46.7</td>
</tr>
<tr>
<td>Module Efficiency η (%)</td>
<td>16.52</td>
<td>16.65</td>
<td>16.78</td>
<td>16.9</td>
<td>17.03</td>
<td>17.16</td>
<td>17.29</td>
<td>17.42</td>
<td>17.55</td>
</tr>
</tbody>
</table>

1) STC:1000 W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. 2) Power measurement uncertainty is within +/- 3%.

### Electrical Parameters at NOCT3

| Power (W) | 234.6 | 236.5 | 238.3 | 240.1 | 242 | 243.8 | 245.6 | 247.5 | 249.3 |
| V_{mp} (V) | 34.5 | 34.6 | 34.6 | 34.7 | 34.8 | 34.9 | 34.9 | 35 | 35.1 |
| I_{mp} (A) | 6.8 | 6.84 | 6.88 | 6.92 | 6.96 | 6.99 | 7.03 | 7.07 | 7.11 |
| V_{oc} (V) | 42.6 | 42.6 | 42.7 | 42.7 | 42.7 | 42.8 | 42.8 | 42.9 | 42.9 |
| I_{sc} (A) | 7.3 | 7.34 | 7.38 | 7.42 | 7.46 | 7.5 | 7.54 | 7.58 | 7.62 |

3) NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec.

### Temperature Coefficients (Tc) permissible operating conditions

- Tc of Open Circuit Voltage (β) -0.31%/°C
- Tc of Short Circuit Current (α) 0.052%/°C
- Tc of Power (γ) -0.41%/°C

### Mechanical Data

- Length × Width × Height: 1955 × 991 × 40 mm (76.96 × 39.01 × 1.57 inches)
- Weight: 22 kg (48.50 lbs)
- Junction Box: IP68/IP67, 3 bypass diodes
- Cable & Connectors: 1200 mm (47.24 inches) length cables, MC4 Compatible/MC4 Connectors/Amphenol
- Application Class: Class A (Safety class II)
- Superstrate: 3.2 mm (0.13 inches) high transmission low iron tempered glass, AR coated cells
- Cells: 72 Polycrystalline, 5BB solar cells
- Cell Encapsulant: EVA (Ethylene Vinyl Acetate)
- Back Sheet: Composite film
- Frame: Anodized aluminium frame with twin wall profile
- Mechanical Load Test: 5400 Pa (Snow load), 2400 Pa (Wind load)
- Maximum Series Fuse Rating: 15 A

### Warranty and Certifications

- **Product Warranty**: 10 years
- **Performance Warranty**: Linear power warranty for 27 years with 2.5% for 1st year degradation and 0.67% from year 2 to year 27
- **Approvals and Certificates**: IEC 61215 Ed2, IS/IEC 61730, UL 1703, IEC 61701, IEC 62716, IEC 60068-2-68, IEC 62804, MCS, CE, CAN/CSA 61730, CEC(California)*, PV Cycle*, CEC (Australia)*, IS 14286

* Also available in anti-soil and anti-glare

### Packaging Information

- Quantity/Pallet: 25
- Pallets/Container (40’HC): 24
- Quantity/Container (40’HC): 600

### Performance Warranty

- Average relative efficiency reduction of 5% at 200 W/m² according to EN 60904-1.

### Typical I-V Curves4

4) Average relative efficiency reduction of 5% at 200 W/m² according to EN 60904-1.

### Performance Warranty

- Average relative efficiency reduction of 5% at 200 W/m² according to EN 60904-1.

### Packaging Information

- Quantity/Pallet: 25
- Pallets/Container (40’HC): 24
- Quantity/Container (40’HC): 600

---

CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.

Specifications included in this datasheet are subject to change without notice. Electrical data without guarantee. Please confirm your exact requirement with the company representative while placing your order.

*Vikram Solar and Eldora are Trademarks of Vikram Solar Limited registered in India.

sales@vikramsolar.com  www.vikramsolar.com

VSL/ENG/SC/104-Rev 09