FEATURES

High-power module (80W) using 125mm square multi-crystal silicon solar cells with 12.60% module conversion efficiency.

Photovoltaic module with bypass diode minimizes the power drop caused by shade.

Textured cell surface to reduce the reflection of sunlight and BSF (Black Surface Field) structure to improve cell conversion efficiency: 14.11%.

White tempered glass, EVA resin, and a weatherproof film, plus aluminum frame for extended outdoor use.

Nominal 12 volt output for battery charging applications

Output terminal: Lead wire with waterproof connector

MULTI-SILICON PHOTOVOLTAIC MODULE WITH 80W MAXIMUM POWER

A safe, clean, reliable source of energy, Sharp’s NE-80E1U photovoltaic module is designed for a variety of electrical power requirements. Based on the technology of crystal silicon solar cells developed over 35 years, this module has superb durability to withstand rigorous operating conditions and is suitable for use in most solar systems.

Common applications for the Sharp NE-80E1U include private residences, RVs, cabins and vacation homes, solar power stations, pumps, beacons and lighting equipment. As the world’s leading manufacturer of photovoltaic modules, Sharp produces an extensive line of high power modules for every electrical power requirement.
NE-80E1U – ADVANCED POWER

APPLICATIONS

- Residences
- Solar Power Stations
- Radio Relay Stations
- Cabins and Vacation Homes
- Lighting Equipment
- RVs
- Solar Villages
- Pumps
- Beacons
- Traffic Signs

ELECTRO-OPTICAL CHARACTERISTICS: NE-80E1U

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Symbol</th>
<th>Min.</th>
<th>Typ.</th>
<th>Unit</th>
<th>Condition</th>
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</thead>
<tbody>
<tr>
<td>Open Circuit Voltage</td>
<td>Voc</td>
<td>–</td>
<td>21.3</td>
<td>V</td>
<td>Irradiance: 1000 W/m²</td>
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<tr>
<td>Maximum Power Voltage</td>
<td>Vpm</td>
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<td>17.1</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Short Current</td>
<td>Isc</td>
<td>–</td>
<td>5.31</td>
<td>A</td>
<td>Module Temperature: 25°C</td>
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<td>Maximum Power Current</td>
<td>Ipm</td>
<td>–</td>
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<td>Maximum Power</td>
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<td>72.0</td>
<td>80.0</td>
<td>W</td>
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<tr>
<td>Encapsulated Solar Cell Efficiency</td>
<td>ηc</td>
<td>–</td>
<td>14.11</td>
<td>%</td>
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<tr>
<td>Module Efficiency</td>
<td>ηm</td>
<td>–</td>
<td>12.60</td>
<td>%</td>
<td></td>
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<tr>
<td>PTC Rating</td>
<td>–</td>
<td>87.80</td>
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FEATURES

High-power module (123W) using 155mm square multi-crystal silicon solar cells with 12.39% module conversion efficiency.

Photovoltaic module with bypass diode minimizes the power drop caused by shade.

Textured cell surface to reduce the reflection of sunlight and BSF (Back Surface Field) structure to improve cell conversion efficiency: 14.13%.

White tempered glass, EVA resin, and a weatherproof film, plus aluminum frame for extended outdoor use.

Nominal 12 Volt output for battery charging applications

Output terminal: Lead wire with waterproof connector

SUPERB DURABILITY WITH IMPROVED CELL CONVERSION EFFICIENCY

MULTI-SILICON PHOTOVOLTAIC MODULE WITH 123W MAXIMUM POWER

A safe, clean, reliable source of energy, Sharp’s ND-L3E1U photovoltaic module is designed for a variety of electrical power requirements. Based on the technology of crystal silicon solar cells developed over 35 years, this module has superb durability to withstand rigorous operating conditions and is suitable for use in most solar systems.

Common applications for the Sharp ND-L3E1U include private residences, RVs, cabins and vacation homes, solar power stations, pumps, telemetry systems, beacons and traffic lights. As the world’s leading manufacturer of photovoltaic modules, Sharp produces an extensive line of high power modules for every electrical power requirement.
ND-L3E1U – HIGH POWER MODULE

APPLICATIONS

- Telecommunications Systems
- Telemetry Systems
- Radio Relay Stations
- Cabins and Vacation Homes
- Solar Power Stations
- Lighting Equipment
- Solar Villages
- Residences
- RVs
- Pumps
- Traffic Signs
- Beacons

SPECIFICATIONS

- Cell: Multi-crystal silicon solar cells
  - 155 mm square
- No. of Cells and Connections: 36 in series
- Application: Battery Charging System
- Maximum System Voltage: DC 600V
- Series Fuse Rating: 10A
- Maximum Power: 110.7W (Min)
- Dimensions: 1499 x 662 x 46mm / 59.06 x 26.08 x 1.812"
- Weight: 14.0kg / 30.87lbs

PARAMETERS SYMBOL MIN. TYP. UNIT
Open Circuit Voltage Voc – 21.3 V
Maximum Power Voltage Vpm – 17.2 V
Short Circuit Current Jsc – 8.12 A
Maximum Power Current Im – 7.16 A
Maximum Power Pm 110.7 123.0 W
Encapsulated Solar Cell Efficiency ηc – 14.13 %
Module Efficiency ηm – 12.39 %
PCT Rating – 87.60%

ABSOLUTE MAXIMUM RATINGS

- Parameters
  - Operating Temperature: -40 to +90 °C
  - Storage Temperature: -40 to +90 °C
  - Dielectric Voltage Withstood: 2200 max. V-DC

OUTPUT TERMINAL

- Type of Output Terminal: Lead Wire with MC Connector

HANDLING SPECIFICATIONS

- Packing Condition: 2 pcs - 1 Carton
- Size of Carton: 146 x 78 x 13cm / 63.04 x 30.73 x 5.122"
- Loading Capacity (20ft container): 196 pcs - 98 carton
- Loading Capacity (40ft container): 420 pcs - 210 carton

ELECTRO-OPTICAL CHARACTERISTICS: ND-L3E1U

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Tel:1-800-BE-SHARP • E-mail: sharpsolar@sharpsec.com • www.sharpusa.com
FEATURES

High-power module (125W) using 125mm square multi-crystal silicon solar cells with 13.26% module conversion efficiency.

Photovoltaic module with bypass diode minimizes the power drop caused by shade.

Textured cell surface to reduce the reflection of sunlight and BSF (Back Surface Field) structure to improve cell conversion efficiency: 14.70%.

White tempered glass, EVA resin, and a weatherproof film, plusaluminum frame for extended outdoor use.

High-voltage output for grid connected system

Output terminal: Lead wire with waterproof connector

AN ADVANCED SOLAR SOLUTION FROM THE GLOBAL LEADER

MULTI-SILICON PHOTOVOLTAIC MODULE WITH 125W MAXIMUM POWER

A safe, clean, reliable source of energy, Sharp’s NE-K125U2 photovoltaic module is designed for large electrical power requirements. Based on the technology of crystal silicon solar cells developed over 35 years, this module has superb durability to withstand rigorous operating conditions and is suitable for grid connected systems.

Common applications for the Sharp NE-K125U2 include residences, office buildings, solar power stations, pumps, lighting equipment and traffic signs. As the world’s leading manufacturer of photovoltaic modules, Sharp produces an extensive line of high power modules for every electrical power requirement.
# Applications

- Grid Connected Residential Systems
- Office Buildings
- Solar Power Stations
- Solar Villages
- Villas
- Pumps
- Lighting Equipment
- Traffic Signs
- Radio Relay Stations
- Beacons

## Specifications

**Cell**
- Multi-crystal silicon solar cells
- 125 mm square

**No. of Cells and Connections**
- 54 in series

**Application**
- High-Voltage System

**Maximum System Voltage**
- DC 600V

**Series Fuse Rating**
- 10A

**Maximum Power**
- 112.5W (Min)

**Dimensions**
- 1190 x 792 x 46mm / 46.887 x 31.2 x 1.812"

**Weight**
- 12.5kg / 27.563lbs

### Electro-Optical Characteristics: NE-K125U2

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Symbol</th>
<th>Min.</th>
<th>Typ.</th>
<th>Unit</th>
<th>Condition</th>
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<tbody>
<tr>
<td>Open Circuit Voltage</td>
<td>Voc</td>
<td>–</td>
<td>32.3</td>
<td>V</td>
<td>Irradiance: 1000 W/m²</td>
</tr>
<tr>
<td>Maximum Power Voltage</td>
<td>Vpm</td>
<td>–</td>
<td>26.0</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Short Circuit Current</td>
<td>Isc</td>
<td>–</td>
<td>5.46</td>
<td>A</td>
<td>Module Temperature: 25°C</td>
</tr>
<tr>
<td>Maximum Power Current</td>
<td>Ipmax</td>
<td>–</td>
<td>4.80</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Maximum Power</td>
<td>Pm</td>
<td>112.5</td>
<td>125.0</td>
<td>W</td>
<td></td>
</tr>
<tr>
<td>Encapsulated Solar Cell Efficiency</td>
<td>ηc</td>
<td>–</td>
<td>14.70</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>ηm</td>
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<td>13.26</td>
<td>%</td>
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PTC Rating – 87.80

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FEATURES

High power module (160W) using 155mm square multi-crystal silicon solar cells with 12.21% module conversion efficiency.

Photovoltaic module with bypass diode minimizes the power drop caused by shade.

Textured cell surface to reduce the reflection of sunlight and BSF (Back Surface Field) structure to improve cell conversion efficiency: 13.99%.

White tempered glass, EVA resin, and weatherproof film, plus aluminum frame for extended outdoor use.

High-voltage output for grid connected system

Output terminal: Lead wire with waterproof connector

MULTI-SILICON PHOTOVOLTAIC MODULE WITH 160W MAXIMUM POWER

A safe, clean, reliable source of energy, Sharp’s ND-Q0E2U photovoltaic module is designed for grid connected electrical power requirements. Based on the technology of crystal silicon solar cells developed over 35 years, this module has superb durability to withstand rigorous operating conditions and is suitable for grid connected systems.

Common applications for the Sharp ND-Q0E2U include residences, office buildings, solar power stations, solar villages, radio relay stations, beacons and traffic lights. As the world’s leading manufacturer of photovoltaic modules, Sharp produces an extensive line of high power modules for every electrical power requirement.
### Applications

- Grid Connected Residential Systems
- Office Buildings
- Solar Power Stations
- Solar Villages
- Villas, Mountain Cottages
- Telecommunication Systems
- Telemetry Systems
- Pumps
- Lighting Equipment
- Traffic Signs
- Radio Relay Stations
- Beacons

### Specifications

**Cell**
- Multi-crystal silicon solar cells
- 155 mm square

**No. of Cells and Connections**
- 48 in series

**Application**
- High-Voltage System

**Maximum System Voltage**
- DC 600V

**Series Fuse Rating**
- 10A

**Maximum Power**
- 144.0W (Min)

**Dimensions**
- 1318 x 994 x 46mm / 51.929 x 39.163 x 1.812"

**Weight**
- 16.0kg / 35.28lbs

### Electro-Optical Characteristics: ND-Q0E2U

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<thead>
<tr>
<th>Parameters</th>
<th>Symbol</th>
<th>Min.</th>
<th>Typ.</th>
<th>Unit</th>
<th>Condition</th>
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</thead>
<tbody>
<tr>
<td>Open Circuit Voltage</td>
<td>Voc</td>
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<td>28.4</td>
<td>V</td>
<td>Irradiance: 1000 W/m²</td>
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<tr>
<td>Maximum Power Voltage</td>
<td>Vpm</td>
<td>–</td>
<td>22.8</td>
<td>V</td>
<td></td>
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<td>Short Current</td>
<td>Isc</td>
<td>–</td>
<td>8.04</td>
<td>A</td>
<td>Module Temperature: 25°C</td>
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<tr>
<td>Maximum Power Current</td>
<td>Ip m</td>
<td>–</td>
<td>7.02</td>
<td>A</td>
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<tr>
<td>Maximum Power</td>
<td>P m</td>
<td>144.0</td>
<td>160.0</td>
<td>W</td>
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<td>Encapsulated Solar Cell Efficiency</td>
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### Handling Specifications

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<tr>
<th>Packing Condition</th>
<th>2 pcs - 1 Carton</th>
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<tbody>
<tr>
<td>Size of Carton</td>
<td>143 x 108 x 13cm / 56.342 x 42.552 x 5.212&quot;</td>
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<tr>
<td>Loading Capacity (20ft container)</td>
<td>224 pcs - 112 carton</td>
</tr>
<tr>
<td>Loading Capacity (40ft container)</td>
<td>448 pcs - 224 carton</td>
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### Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Rating</th>
<th>Unit</th>
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<tr>
<td>Operating Temperature</td>
<td>-40 to +90</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40 to +90</td>
<td>°C</td>
</tr>
<tr>
<td>Dielectric Voltage Withstood</td>
<td>2200 max.</td>
<td>V-DC</td>
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</tbody>
</table>

### Output Terminal

- Type of Output Terminal: Lead Wire with MC Connector

Specifications are subject to change without notice.

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 FEATURES

High-power module (165W) using 125mm square multi-crystal silicon solar cells with 12.68% module conversion efficiency.

Photovoltaic module with bypass diode minimizes the power drop caused by shade.

Textured cell surface to reduce the reflection of sunlight and BSF (Back Surface Field) structure to improve cell conversion efficiency: 14.55%.

White tempered glass, EVA resin, and a weatherproof film, plus aluminum frame for extended outdoor use.

Nominal 24 DC output, perfect for grid connected systems

Output terminal: Lead wire with waterproof connector

A DURABLE MODULE FOR LARGE ELECTRICAL POWER NEEDS

MULTI-SILICON PHOTOVOLTAIC MODULE WITH 165W MAXIMUM POWER

A safe, clean, reliable source of energy, Sharp’s NE-Q5E2U photovoltaic module is designed for large electrical power requirements. Based on the technology of crystal silicon solar cells developed over 35 years, this module has superb durability to withstand rigorous operating conditions and is suitable for grid connected systems.

Common applications for the Sharp NE-Q5E2U include residences, office buildings, solar power stations, solar villages, radio relay stations, beacons and traffic lights. As the world’s leading manufacturer of photovoltaic modules, Sharp produces an extensive line of high power modules for every electrical power requirement.
NE-Q5E2U – MAXIMUM POWER

APPLICATIONS

- Grid Connected Residential Systems
- Office Buildings
- Solar Power Stations
- Solar Villages
- Villas, Mountain Cottages
- Telecommunication Systems
- Telemetry Systems
- Pumps
- Lighting Equipment
- Traffic Signs
- Radio Relay Stations
- Beacons

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Cell</th>
<th>Multi-crystal silicon solar cells</th>
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</thead>
<tbody>
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<td>No. of Cells and Connections</td>
<td>72 in series</td>
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<tr>
<td>Application</td>
<td>DC 24V system</td>
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<td>Maximum System Voltage</td>
<td>DC 600V</td>
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<tr>
<td>Series Fuse Rating</td>
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<tr>
<td>Maximum Power</td>
<td>148.5W (Min)</td>
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<tr>
<td>Dimensions</td>
<td>1575 x 826 x 46mm / 62.05 x 32.44 x 1.812&quot;</td>
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<tr>
<td>Weight</td>
<td>17.0kg / 37.485lbs</td>
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ABSOLUTE MAXIMUM RATINGS

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<thead>
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<th>Parameters</th>
<th>Rating</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
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<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40 to +90</td>
<td>°C</td>
</tr>
<tr>
<td>Dielectric Voltage Withstood</td>
<td>2200 max.</td>
<td>V-DC</td>
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</table>

OUTPUT TERMINAL

| Type of Output Terminal | Lead Wire with MC Connector |

ELECTRO-OPTICAL CHARACTERISTICS: NE-Q5E2U

<table>
<thead>
<tr>
<th>Parameters</th>
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<th>Typ.</th>
<th>Unit</th>
<th>Condition</th>
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<td>Open Circuit Voltage</td>
<td>Voc</td>
<td>–</td>
<td>43.1</td>
<td>V</td>
<td>Irradiance: 1000 W/m²</td>
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<tr>
<td>Maximum Power Voltage</td>
<td>Vpm</td>
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<td>34.6</td>
<td>V</td>
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<tr>
<td>Short Current</td>
<td>Isc</td>
<td>–</td>
<td>5.46</td>
<td>A</td>
<td>Module Temperature: 25°C</td>
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<td>Ipm</td>
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<td>A</td>
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<td>Maximum Power</td>
<td>Pm</td>
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<td>165.0</td>
<td>W</td>
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<td>PTC Rating</td>
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