



- Highest current output and unmatched performance compared to solar-based chargers on the market
- Easily connects to iPods, digital cameras, GPS, gaming consoles, and other mobile devices

## NovaCell™

A pocket-sized, go anywhere, power anything, universal charger

**SUNCORE INTRODUCES** the industry's most advanced, light-driven, handheld charger that connects to today's most popular mobile devices and increases user operating time between battery charges. Proprietary technologies combine to harvest energy from virtually any light condition—indoor ambient and incandescent to sunlight and shade. NovaCell is ready anytime a consumer needs it.

**NOVACELL™** can assist OEMs and Operators in quick response to consumer support and purchase of green technology products. Of particular interest—a result of speed-to-market—NovaCell can easily become an individually packaged accessory or a companion to other handheld devices.

**PHOTOVOLTAIC (PV) PANEL** Proprietary, monolithically-interconnected back-point junction PV panel is responsible for a spectral sensitivity range of 300 to 1200 nanometers, well beyond the visible light spectrum.

**CHARGE MANAGEMENT** Built-in intelligence of the microcontroller-based charge-management circuitry and software optimize the absorbed energy's high-efficiency transfer rate from the PV panel to the battery, as NovaCell is moved within and between varying

light conditions. This unique process ensures the greatest voltage level and current output, ultimately extending user operating time.

**BATTERY POWER INDICATORS** Centered on the lower faceplate for greatest visibility, five LED lights indicate the power level of the built-in lithium battery. Armed with this information, a user can determine the necessity to increase power reserves. Each LED light represents the remaining battery power at 20% increments with an accuracy of 1%.

**LIGHT POSITIONING INDICATORS** A sun icon, also on the faceplate, continuously displays charge strength under various light conditions. The icon's intensity signals when optimal exposure to light is achieved, maximizing charge output. An intense, brightly-lit icon shows the ideal light level for greatest power output. Conversely, a softly-lit icon represents adequate light for recharging.

**BRANDING OPPORTUNITY** The faceplate surrounding the PV panel and the exterior shell can be modified to support company brand identity, dependent on order volume.



**CONNECTING CORD**

1.219 meters (4') long, 12 gauge cable, the charging connection between an external mobile device and a NovaCell

**CONNECTORS**

Mini USB connector with assorted tips for charging a wide variety of popular handheld consumer electronics

**CURRENT OUTPUT**

PV Panel: 360 mA  
 Device Output: 2400 mA

**TECHNICAL FEATURES**

**DEVICE SPECIFICATIONS**

Output Voltage of 5.0 Vdc via Mini USB  
 Capacity: 2500 mA

**CIRCUIT SPECIFICATIONS**

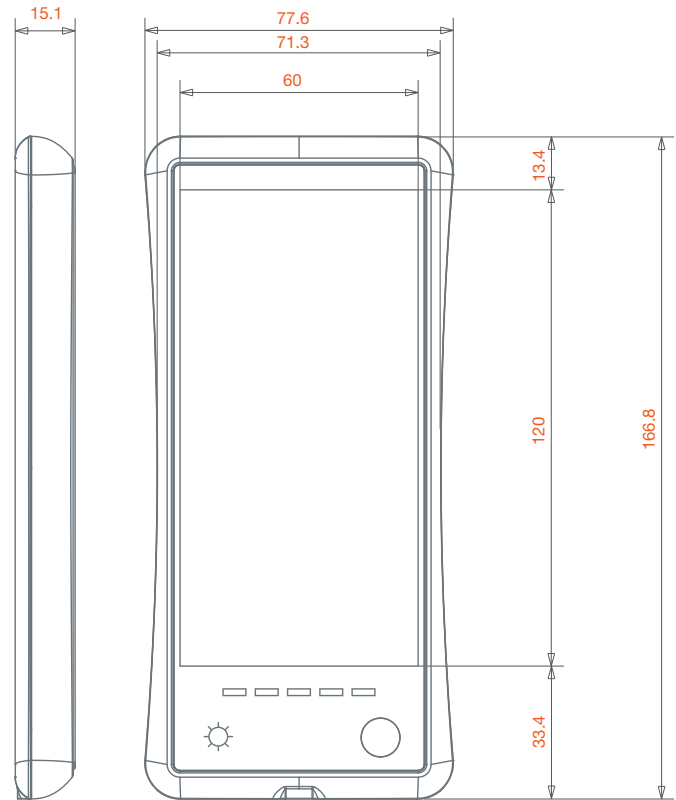
Photovoltaic Panel Efficiency: >22%  
 Charger Circuit Efficiency: 91%  
 Boost Efficiency: 95% (93% @3Vdc to 96% @4.2Vdc)  
 Fuel Gauge Accuracy: 1%  
 High Accuracy Voltage (+/-0.5%) and Current (+/-5%) regulation  
 Programmable Termination Current: 15mA, 30Ma, 45mA... to 125 mA  
 Programmable Charge Current: 170mA, 201mA, 231mA... to 386mA  
 Programmable Battery Regulation Voltage: 3.52 to 4.44 in 20mV steps  
 Programmable Battery Temperature Sense  
 Programmable Hysteresis on Temperature Detect  
 Energy Harvesting with Reduced Charge Current: down to 16 mA  
 Maximum Power Point Tracking (MPPT) of the PV panel  
 CC/CV Charge Algorithm  
 High Impedance Mode for Low Power Consumption  
 Compensates for PV voltage variations by continuing regulated charge over operational battery range  
 Safety Timer

**PHOTOVOLTAIC SPECIFICATIONS**

Thermal Isolation of PV panel from battery  
 PV Panel: Vmp = 4.56, Imp = 350mA

**EXTERIOR CONSTRUCTION**

**EXTERIOR SHELL** Impact resistant plastic with heat dissipating characteristic  
**TOP COVER** Impact resistant, transparent nylon-with full spectrum transmission response  
**BACK-SIDE BASE** Over-moulded non-slip surface



**DIMENSIONS**

**DEVICE**

Length: 166.8 mm  
 Width at mid-point: 71.3 mm  
 Width top and bottom: 77.6 mm  
 Depth: 15.1 mm  
 Weight: 177g

**FACEPLATE FRAME**

Top edge to PV panel: 13.4 mm  
 PV panel to bottom edge: 33.4 mm

**PV PANEL ASSEMBLY**

Length: 120 mm  
 Width: 60 mm

**SUNCORE CORPORATION**

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