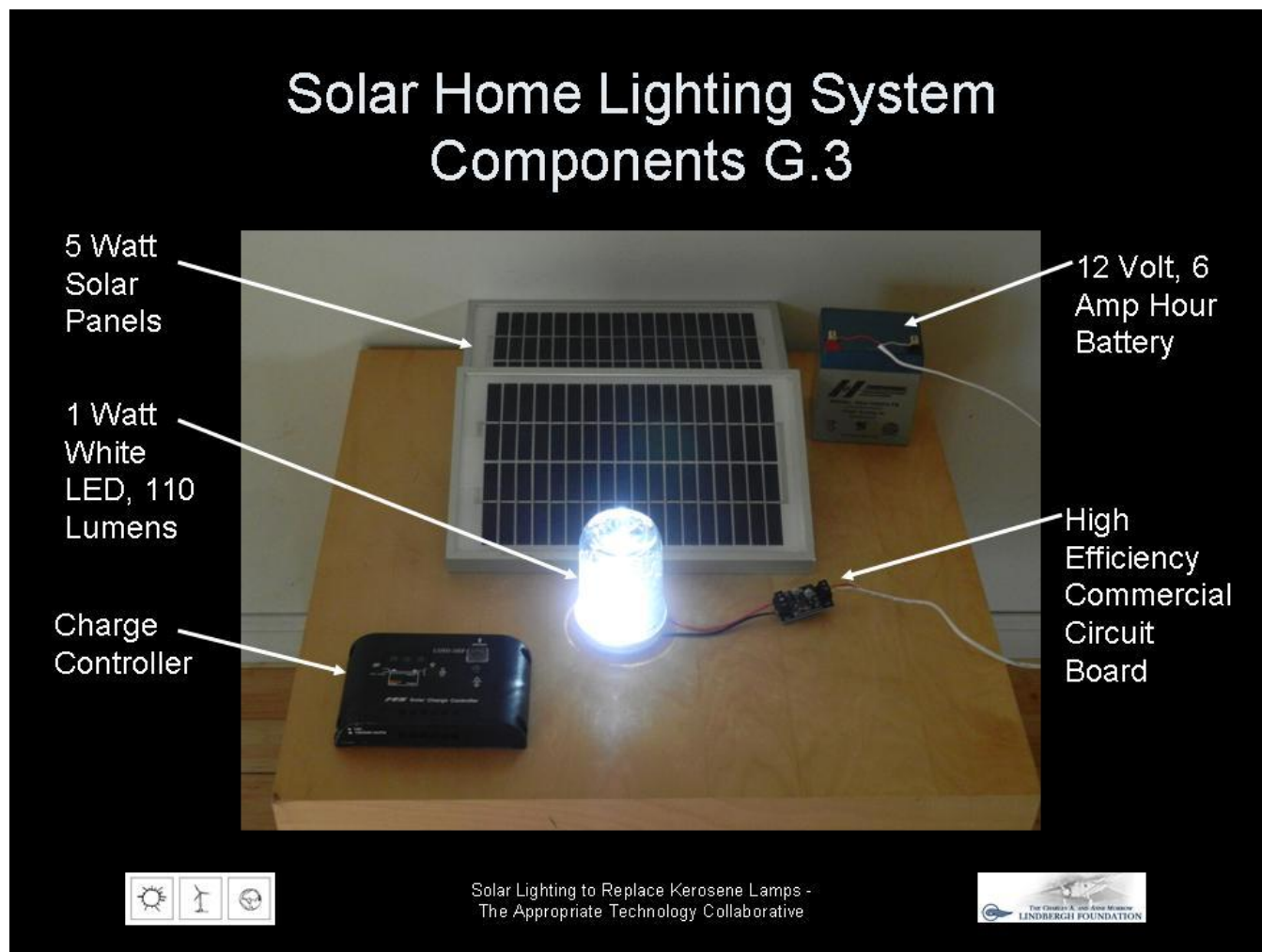




The Appropriate Technology Collaborative

ATC Small Scale Home Energy System



The ATC Standard home installation is a 12v, expandable system that includes (2) LED lights and a cell phone charger. The system is modular. Once installed the system can support more solar panels + batteries. Expanded systems can support a 12v outlet for radio or small computer.

The Appropriate Technology Collaborative can support companies interested in our lighting system by bulk purchase of components.

Solar Panels:



Vendor:

South Face Solar Power
c/o Coy Ware
37715 Palo Colorado Rd
Carmel, CA. 93923

Specifications:

Maximum Power at STC (P_{max})	5W
Tolerance	+5%
Eff. Of cell	16.6%
Kind of cell	Poly - crystalline
Optimum operating Voltage (V_{mp})	17.8V
Optimum operating Current (I_{mp})	0.28A
Short circuit Current (I_{sc})	0.32A
Open circuit Voltage (V_{oc})	22.3V
Coeff of Volt per C	-0.38%
Nominal voltage of Battery	12V
Operating Temperature	-40 ⁰ C ~ +85 ⁰ C
Length	250mm
Width	193mm
The height of module	25mm
Weight	0.8kg

Cost: \$19.00 (ATC Summer 2011)

Voltage Controller:



Vendor:

Eleseed Via EBAY
Hong Kong, Hong Kong

10A Solar Panel Charge Controller Regulator 12V/24V
Compatible with 240W solar panel with dark activated function, Max current is 10A

Specifications:

10A solar light controller
1 Microcontroller digital accuracy
2 PWM charge mode & State of Charge(SOC)
3 Fully automatic operation & Electronic protections
4 Detects day and night using the PV array, timer setting
5 Double digital LED display, numbers equal to timer setting
6 Temperature compensation, with external temperature sensor
7 Big terminals, big distance between terminals
Equalisation voltage: 14.8Volt
High voltage disconnect(HVD): 14.4Volt
Float voltage: 13.6Volt
Low voltage disconnect(LVD) 11.1Volt
Low voltage reconnect(LVR): 12.6Volt
Self-consumption: 6mA maximum
Temperature compensation: -30mV/°C/12V
Terminals: for wire sizes to 6mm ²
Temperature: -35°C to +55°C

Cost: \$10.50 (ATC Summer 2011)

LED Transformer - High Power 1W LED Driver:



Specifications:

Size: 45.80(L) × 25.50(W) × 17.80(H) ±0.2mm
Input voltage: 9V to 35V
93% efficiency @ input voltage 24V, 6 LEDs
Typical 333mA output current
PWM frequency: 100HZ to 1KHZ
Step-down DC/DC
Constant current output
TO252 packaging of MBI6651 helps heat dissipation
Untested under conditions of more than 6 LEDs
Allows users to control the dimming via an external PWM
Easy installation and long service life

Vendor:

Sales@Parts-Express.com
1-800-338-0531

Parts Express,
725 Pleasant Valley Dr.,
Springboro, OH
45066 USA

Cost: \$2.40 (ATC Summer 2011)

LEDs:

Note: We place LEDs in a sealed glass fixture so that soot from indoor cooking does not collect on the LED.



SPECIFICATION:

Lens Color : Water Clear
Emitted Color : White (5900 ~ 6200 K)
Lumen: 100 ~ 110 Lux
Forward Voltage (V) : 3.0v-3.4v
Forward Current (IFM): 350mA

Vendor:

Sunky Via EBAY
shenzhen,guangdong province, China

Cost: \$1.00 (ATC Summer 2011)