SOLAR PANELS

FEATURES

- Constructed of Vinyl Laminated Semi crystalline Silicon
- Self-cleaning Glass
- Withstands Wind Loading Up to 125 MPH
- Solid-State, Weatherproof
- Voltage Regulator Included

Climatronics’ Solar Panels, P/N 100800, are designed to be mounted either singly or in multiple panel arrays wired in series or parallel combinations to meet voltage and power requirements.

These solar cells as constructed are highly efficient, stable, and inherently resistant to the “hot-spot” damage which can affect panels of other design.

Cell strings are laminated between sheets of ethylene vinyl acetate and a sheet of 1/8” tempered low-iron glass. The self-cleaning glass retains its excellent transmissivity indefinitely and is resistant to mechanical stress, including impact of hail up to one inch in diameter.

All solar panels include an industrial quality regulator that is intended to control battery charging (nominal 12V battery system) and prevent overcharging in small and mid-sized photovoltaic power systems. The voltage regulator is efficient, compact reliable and totally weatherproof. The regulator contains a blocking diode to prevent reverse current flow from the battery to the solar panel during periods of insufficient sunlight. All regulators are mounted inside junction boxes on the underside of the panel. The regulator uses a unique low frequency, switching technique, which does not generate RFI, making it fully compatible with communications systems.

All panels include universal mounting hardware to mount the panel to a circular surface such as tower mast or leg. The 10-watt panel (100800-G1) includes up to fifty feet of power cable and a 12V 8 amp-hour battery. Cables and batteries are separately configured for the larger solar panels.
### SPECIFICATIONS

#### P/N 100800-G1

**PERFORMANCE:**
- Temperature coefficient of I: 675 uA/°C
- Temperature coefficient of V: -88 mV/°C
- Approximate effect of temperature on power: -0.4%/°C

**ELECTRICAL:**
- Guaranteed minimum peak power: 10 watts
- Typical peak power (Pp): 11.5 watts
- Voltage at peak power (Vpp): 18V
- Current at peak power (Ipp): 0.64 amps
- Current at specified voltage: 0.68 amps at 15V
- Short-circuit current (Isc): 0.7 amps
- Open-circuit voltage (Voc): 22V

**PHYSICAL:**
- Weight: 6 lbs. (2.7 kg)
- Dimensions: 17.5" H x 11.9" W x 2.1" D

#### P/N 100800-G2

**PERFORMANCE:**
- Temperature coefficient of I: 1350 uA/°C
- Temperature coefficient of V: -88 mV/°C
- Approximate effect of temperature on power: -0.4%/°C

**ELECTRICAL:**
- Guaranteed minimum peak power: 20 watts
- Typical peak power (Pp): 23 watts
- Voltage at peak power (Vpp): 18V
- Current at peak power (Ipp): 1.4 amps at 15V
- Current at specified voltage: 1.4 amps at 15V
- Short-circuit current (Isc): 1.48 amps
- Open-circuit voltage (Voc): 22V

**PHYSICAL:**
- Weight: 13 lbs. (4.9kg)
- Dimensions: 21.9" H x 17.5" W x 2.1" D

### P/N 100800-G3

**PERFORMANCE:**
- Temperature coefficient of I: 0.65%/°C
- Temperature coefficient of V: -80 mV/°C
- Approximate effect of temperature on power: -0.4%/°C

**ELECTRICAL:**
- Guaranteed minimum peak power: 37.5 watts
- Typical peak power (Pp): 40 watts
- Voltage at peak power (Vpp): 17.1V
- Current at peak power (Ipp): 2.34 amps at 15V
- Current at specified voltage: 2.53 amps
- Short-circuit current (Isc): 2.53 amps
- Open-circuit voltage (Voc): 21.1V

**PHYSICAL:**
- Weight: 11.8 lbs. (5.35 Kg)
- Dimensions: 30.0" H x 19.8" W x 2.1" D (76.2cmH x 50.2cmW x 5.3cmD)

### P/N 100800-G4

**PERFORMANCE:**
- Temperature coefficient of I: 0.65%/°C
- Temperature coefficient of V: -80 mV/°C
- Approximate effect of temperature on power: -0.4%/°C

**ELECTRICAL:**
- Guaranteed minimum peak power: 47.5 watts
- Typical peak power (Pp): 50 watts
- Voltage at peak power (Vpp): 17.1V
- Current at peak power (Ipp): 2.92 amps at 15V
- Current at specified voltage: 3.17 amps
- Short-circuit current (Isc): 3.17 amps
- Open-circuit voltage (Voc): 21.1V

**PHYSICAL:**
- Weight: 11.8 lbs. (5.35 Kg)
- Dimensions: 36.8" H x 19.8" W x 2.1" D (93.4cmH x 50.2cmW x 5.3cmD)

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