



SEA'S MODEL SOLAR CAR CHALLENGE 2011

RECOMMENDED SUPPLIERS

Engineered Electronics

Contact: John Jeffery

21 Fairisle Terrace

Howrah TAS 7018

T: +61 3 6247 8883

F: +61 3 6247 1336

E: John.Jeffery@engelec.com.au

W: www.engelec.com.au

For: solar modules, Faulhaber motors and maximisers

New 4 cell solar modules: These have been specially made for use on model solar cars and are very rugged. They are the same size as the old Dick Smith modules and identical construction to the 3 cell modules obtained last year. That is, 63mm x 120mm epoxy coated fibreglass, with large soldered pads on the rear.

A quick test in the sun gave 425mA from a 4 cell module as opposed to 508mA from a 3 cell module. There is no spare space on the 4 cell modules meaning that they produce more power. Teams should only need 8 rather than 10 which will actually give them a higher maximum power voltage but less ballast weight and lower cost.

Below are the results for the 4 cell modules tested at 1 Sun, AM1.5, 25 degrees:

Voc: 2.437V

Vmp: 1.975V

Imp: 0.464A

Isc: 0.491A

Pmax: 0.916W

FF: 0.765

This is for the 28mm wide cells. For the 25mm wide cells multiply the current and power by 25/28, the voltages are the same.

3 cell solar modules \$12 + gst

4 cell solar modules \$14 + gst

Express post to WA \$11

Faulhaber 2232 6V motors

Cost at the moment is \$135 + GST (varies depending on exchange rate).

Manual maximisers are \$75 + GST, built and tested.

The fully automatic version Mark II is under way, built but not fully programmed as yet.

Kite Magic

Contact: Michael Richards (Will make panels to your requirements or provide cells for you to make your own)

1/99 Malabar Road

Coogee NSW 2034

T: (02) 9315 7001

F: (02) 9315 8534

M: 0411 357 894

E: Michael@kitesite.com.au

6 cell	
Weight:	463g
V(open circuit)	14.4V
Current(short circuit)	0.81A
Power (approx.)	9.1 watts
Dimensions	32cm x 25cm
COST	\$100 + GST

8 cell	
Weight:	637g
V(open circuit)	18.4V
Current(short circuit)	0.81A
Power (approx.)	11.5 watts
Dimensions	32cm x 33cm
COST	\$132 + GST

** 5 cell gives about 7.5 watts at 12V

** 7 cell gives about 10.5 watts at 16.8V

Fred Adler, Head Scrutineer has tested these panels and provided the comment below:

Panels are well made on corflute and well-constructed. Could not have done any better myself. I would be hesitant to run the 8 cell panel as on the light box it may exceed 12 watts. Both panels are available for inspection at the Curriculum Council until end Term 2. Under the new rules, the 6 cell panel would be ideal, especially if you want to run without a maximiser. Please contact me if you would like inspect the panels:

Fred Adler: Fred.adler@curriculum.wa.edu.au or T: 9273 6700

WA SUPPLIERS

Ace Models

4 Victoria St, Midland 6056

T: 9274 8333 or 9274 4519

F: 9250 1896

E: sales@acercmodels.com.au

W: <http://acercmodels.cleverappz.com.au/index.php>

Stanbridges

23 Railway Parade, Mt Lawley Perth 6050

T: 9271 8929

F: 9271 4683

E: sales@stanbridges.com.au

W: <http://www.stanbridges.com.au/>

Jaycar

Maddington, Midland, Perth, Rockingham

See website for store contact details

W: <http://www.jaycar.com.au/>

AUSTRALIAN SUPPLIERS

R and I (VIC)

T: (03) 9551 0956

F: (03) 9551 0958

E: info@rigear.com.au

W: <http://www.rigear.com.au/>

Small Parts & Bearings (QLD)

No phone service offered.

All communication via email and fax.

F: (07) 3349 1003

E: sales@smallparts.com.au

W: <http://www.smallparts.com.au/>

Scorpio Technology (VIC)

T: (03) 9802 9913

F: (03) 9887 8158

E: sales@scorpiotechnology.com.au

W: <http://www.scorpiotechnology.com.au/>

Maxon Motors (NSW)

T: (02) 9476 4777

F: (02) 9476 4866

W: <http://www.maxonmotor.com.au/>