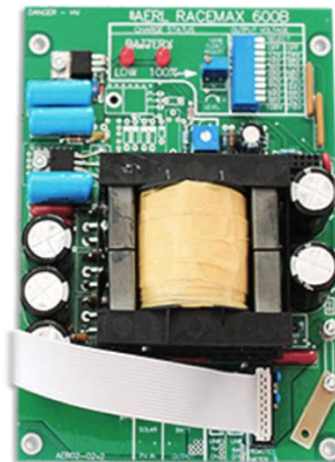


## 1 **PRODUCT OVERVIEW**

The AERL RACEMAX 600B MAXIMIZER™ is a high efficiency, boost only, common negative peak power point tracker specially designed for Solar Racing Cars. It employs a tracking strategy which regulates the PV array voltage to a fixed percentage of its open circuit voltage. This tracking strategy has been proven to be highly robust, immune to local extrema, and results in power losses of less than 0.5% over the whole operating temperature range of a PV array.

The improved power of the new RACEMAX over previous models makes it an ideal choice for solar car teams looking to get the most out of their PV array.



## 2 **PRODUCT FEATURES:**

Some of the RACEMAX 600B's main features include:

- High 98 – 99% peak operating efficiency
- Compatible with all types of solar cells and battery arrays
- Passive cooling & no moving parts results in highly reliable operation to 50°C
- Output voltage options between 48 -144V
- Compact and lightweight design, weighing only 750g
- Charges higher voltage battery packs from lower voltage solar arrays



**3 MODEL SPECIFICATIONS**

<b>Performance Data</b>		
<b>Symbol</b>	<b>Parameter</b>	<b>Max</b>
$T_{amb}$	Maximum ambient air temperature	50°C
$I_{sc-const}$	PV panel short circuit current - constant	6A
$I_{sc-trans}$	PV panel short circuit current – transient	8A

<b>Electrical Characteristics</b>			
<b>Symbol</b>	<b>Parameter</b>	<b>Min</b>	<b>Max</b>
$P_{mp}$	Solar panel peak power	0W	600W
$V_{oc}$	PV panel open circuit voltage	40V	135V
$\eta$	Efficiency @ 6A, 100Vmp (144Vbatt), & 25°Camb	97.60%	-
$V_{Batt}$	Battery Voltage (Selectable)	48-144V	

<b>Physical Characteristics</b>	
<b>Parameter</b>	<b>Typical</b>
Weight	720g
Dimensions (L x W x H)	170 x 120 x 65 mm

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