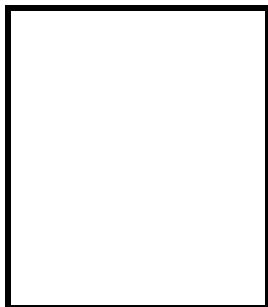


TEAM:	#
--------------	---

Station	Grade	Comments
Array	/	
Driver		
Body & Sizing		
Electrical		
Battery Protection		
Mechanical		
Dynamics		

TEAM:	#
--------------	---

Regulation	Grade	Comments
Solar Array Output		
Voltage	/	
Amperage	/	
Power	/	



Station Manager:

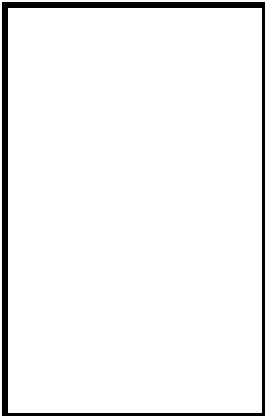
Entrance:

Array disconnected from battery.

Regulation \ Driver	Driver 1	Driver 2	Driver 3	Driver 4
3.9 Registration – All drivers are registered with headquarters (have ID)				
3.9 Driver Req. – All drivers are 18 or older				
3.9 Driver Req. – Drivers have valid drivers license				
7.6.C Driver Shoes – Valid shoes				
3.9,A, 6.6.C&D & 7.6.D Driver Ballast – Each driver ballasted to 80 kg (176 lbs)				
Driver Weight / Ballast Weight (driver weight includes driving clothes and shoes but not helmet)	/	/	/	/
Color Tag / Security Marker	/	/	/	/
6.4.E.2 Roll Cage – 50 mm clearance b/w roll cage and helmet, 30 mm clearance b/w padding & helmet				
6.4.C Distance to extents – min. 150 mm b/w shoulders, hips, feet, and outer body				
6.4.G Egress – 10 sec fully out of solar car, no wheel chocks, unassisted				
6.5.A Visibility – eye height = must be 700 mm or greater				
6.5.B Forward Vision - ground @ 8 m, 17° up, 100° side to side				
6.5.E Rear Vision - 15 m back, 30° L/R single reflex image				
Appendix H. Driver Training – not mandatory, but review with team				

TEAM:	#
--------------	---

Regulation	Grade	Comments
3.9 Driver Req. - There are a min. of 2 drivers / max. of 4		
7.6.B Driver Helmets – Meets or exceeds Snell M95 / DOT / ISO motorcycle		
7.6.F Water/Fluids – plan for water/fluid provision (1L min)		
7.5 & 7.5.A Radios/Communication – Driver in radio contact with team, hands free		
7.5.B Cell Phone in solar car – hand’s free and fixed mounting		
6.6.B Ballast Access – located in solar car, and visible		



Station Manager:

Entrance:

All drivers report with ballast material, helmet(s), proper driver/passenger uniforms with fully assembled solar car and radio communication

Station Grade:

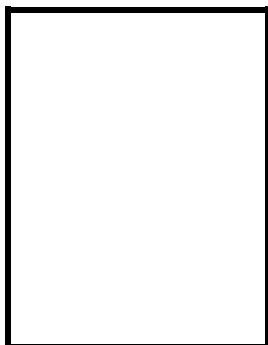
- Green = Pass
- Blue = Needs improvement / FSGP Penalty Condition
- Yellow = Needs improvement / Dynamic Test Ready
- Red = Fail / Safety Hazard

TEAM:	#
--------------	---

Regulation	Grade	Comments
Body Signals		
5.9 Lighting – brake; red, visible 30° L/R, 15° U/D at 30 m, 25% of vehicle width from CL, rear extremity		
5.9 Lighting – brake; red, visible 30° L/R, 15° U/D at 30 m, high mounted rear of vehicle canopy		
5.9 Lighting – rear turn; red/amber, visible 30° L/R, 15° U/D at 30 m, 25% of vehicle width from CL, rear extremities		
5.9 Lighting – front turn; amber, visible 30° L/R, 15° U/D at 30 m, 25% of vehicle width from CL, front extremities		
5.10 Horn – sound level b/w 75-102 dB @ 15 m, permanently mounted, steering wheel operated. Duration for 5 min potential		
Body Graphics and Dimensions		
3.11.A Solar Car Numbers – approved color, 50 mm background, 250 mm high, 120 mm wide, 40 mm brush stroke, 25 mm spacing		
3.11.B Institution Name – displayed on car with approved abbreviations and more prominent than any team sponsor logo/name no disruptive or offensive graphics		
3.11.C Event Logo –space (200 mm H x 300 mm W) on both sides		
6.1 Solar Car Dimensions – Max. Dimensions L = 5.0 m W = 1.8 m H = 1.6 m		
6.1.B Rayce Configuration – body remains fixed (no reorientation/tilting) when moving under its own power		
6.1.A Charging Configuration – solar car body may split into two components; each component may not exceed the dimensions of the assembled car		
6.4.H Number of Occupants – Max. of (1)		

Cockpit		
6.4.A Seating Position – driver head above and behind feet. 27 degree or less, solid base & back rest		
6.4.B Belly Pan – full isolation and ability to support 80 kg. Driver above lower element of chassis		
6.4.E.1 Padding – roll cage padded around head meeting SFI-45.1 or better, 20 mm thick headrest		
6.4.E.1 Headrest – headrest provided with 20 mm thick padding		
6.4.F Outside Air Circulation – cockpit vents / intake vents		
6.4.G Egress – No tape used at egress point		
6.5.C & 6.5.D Windshield – shatter resistant, method to clear rain, distortion free		
Raycing Requirements		
6.11 Towing Hardpoint and tow strap for breakdowns per track regs		
6.13 Data logger – position for exposure to sky and fixed in position		
Vehicle Weight and Tires		
Vehicle Weight LF - RF- LR- RR- Total:		
6.3 Tire Sets – tire configurations meet loading requirement, min 3 points of contact		
6.3A Tire Ratings – weight <wheel rating> tires inflated w/in manf. rating tube-type tires need tubes		
Tire Set Configuration NOTES:		

Solar Array Sizing		
5.2 Style _____ 6m² of solar cells from approved list (5.2.C)		
3.3.F Solar Cell Technology – Solar cells match information given on approval form		
5.2.B Example Cell and map provided that match physical array on car		
5.2.A No more than 6 cell types used		



Station Manager:

Entrance:

Driver in fully assembled solar car

Station Grade:

Green = Pass

Blue = Needs improvement / FSGP Penalty Condition

Yellow = Needs improvement / Dynamic Test Ready

Red = Fail / Safety Hazard

TEAM:	#
--------------	----------

Regulation	Grade	Comments
5.1 Power – Solar array is present, no non-solar power sources		
5.3.A Battery Max weights _____ Pb-acid sealed (110 kg) _____ NiMH (45 kg) _____ LiFePo ₄ (30 kg) _____ Li-ion / Li Polymer (20 kg) _____ 5.3.B. (Other)		
5.5.D Battery Ventilation – 280 L/min to exterior vent, operates with battery switch		
5.5.C External Cooling		
5.5.A, 5.5.C Battery Enclosures – isolated w/ 1 MΩ to frame, non-conductive, labeled		
5.7.B External Cutoff Switch – properly marked and rated for load		
5.13 Electrical Shock Hazards – protected and marked w/ 10 mm labels		
5.3.C, 5.3.A Other Storage Techniques – Power condensers or flywheels		
5.5 & 7.16 Battery Removal – batteries can be removed and have appropriate storage case		
3.3.E & 5.3 Storage Batteries – match submitted approval form		
5.3 Battery Pack Weight		
5.5.B Battery Mounting		
5.3.B Supplemental Batteries – radios, meters, telemetry, driver fan, main disconnect relay, horn only		
5.6 Main Fuse - < 200% I _p , first in series		
5.7.A Power Switch – manual switch capable to interrupt I _p , 10 mm labels, normally open		
5.8.B Electrical Connection – between array and car are carried internally		
5.8.A Cable Sizing – proper size for I _p		
5.11 Accelerator – zero return, brake shutoff on cruise control		
5.12 Control – driver has sole control		

Station Manager: _____

Entrance: _____
 To be announced.

Station Grade:
 Green = Pass
 Blue = Needs improvement / FSGP Penalty Condition
 Yellow = Needs improvement / Dynamic Test Ready
 Red = Fail / Safety Hazard

TEAM:	#
--------------	----------

**BATTERY PROTECTION SYSTEM
OVER VOLTAGE (OV) TEST**

String Module Cell – Test Level Pass Fail

Nominal Voltage: _____ Vnom @ ____ °C	BPS V Resolution: _____ Bit
Max Voltage: _____ Vmax @ ____ °C	BPS V Range: _____ - _____ VDC
BPS Max Trip: _____ Vmax_trip	BPS Sample Rate: _____ S/s
<input type="checkbox"/> Filtering <input type="checkbox"/> Delay	BPS Disconnect Delay: ____ s

**BATTERY PROTECTION SYSTEM
UNDER VOLTAGE (UV) TEST**

String Module Cell – Test Level Pass N/A Fail

Nominal Voltage: _____ Vnom @ ____ °C	BPS V Resolution: _____ Bit
Min Voltage: _____ Vmin @ ____ °C	BPS V Range: _____ - _____ VDC
BPS Min Trip: _____ Vmin_trip	BPS Sample Rate: _____ S/s
<input type="checkbox"/> Filtering <input type="checkbox"/> Delay	BPS Disconnect Delay: ____ s

**BATTERY PROTECTION SYSTEM
OVER CURRENT (OC) TEST**

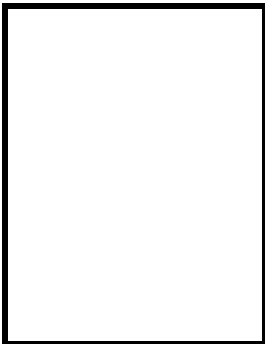
String Module – Test Level Pass N/A Fail

Max Current: _____ Imax @ ____ °C	BPS I Resolution: _____ Bit
BPS I Trip: _____ Imax_trip	BPS I Range: _____ - _____ VDC
<input type="checkbox"/> Filtering <input type="checkbox"/> Delay	BPS Sample Rate: _____ S/s
	BPS Disconnect Delay: ____ s

**BATTERY PROTECTION SYSTEM
OVER TEMPERATURE (OT) TEST**

String Module Cell – Test Level Pass N/A Fail

Max Operating Temperature: _____ °C	BPS T Resolution: _____ Bit
BPS T Trip: _____ °C Tmax_trip	BPS T Range: _____ - _____ °C
	BPS Sample Rate: _____ S/s
	BPS Disconnect Delay: ____ s



Station Manager:

Entrance:

To be announced.

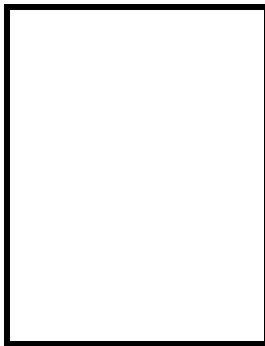
Station Grade:

- Green = Pass
- Blue = Needs improvement / FSGP Penalty Condition
- Yellow = Needs improvement / Dynamic Test Ready
- Red = Fail / Safety Hazard

TEAM:	#
--------------	---

Regulation	Grade	Comments						
3.3.B Structural Report – Vehicle matches structural report								
5.5.B Battery Enclosures – structurally sound and properly secured to chassis								
6.6.A Ballast Carrier – structurally sound and properly secured to chassis								
6.2 Body panels and array – securely fastened to prevent unintended movement								
6.2.A Covers and Shields – all moving parts protected against contact. Driver shielded from steering linkage and other moving parts								
6.2.B Clearance – moving parts are interference free								
6.2.B Steering Static Test – can turn lock to lock while still, no excessive play in steering								
6.3 Wheels – Wheels meet the minimum requirements								
6.4 Driver cockpit – designed for protection, will not cause undue strain								
6.4.D Safety Belts – commercial 5 pt., proper positioning of attachment points, properly attached with nuts and bolts								
6.4.E Roll Cage – designed to encompass driver in all directions, integral part of chassis								
Critical Areas (Reg 6.7.E)	Steering	Brakes	Front Suspension	Rear Suspension	Seat/Safety Harness	Drive Train	Battery Box	Ballast Box
6.7 - Critical Areas do not use friction or press fit assemblies								
6.7.A Bolts – SAE grade 5, M 8.8 or AN/MS on critical systems, two threads beyond nut, no shaved heads								
6.7.B Securing Bolts – safety wire, cotter pins or flex-loc nuts								
Fastener/Hardware Notes:								
6.7.C Securing Rod-Ends – All rod-ends secured with jam nuts								
6.10.A Steering Wheel – continuous perimeter steering wheel. Ref. Appendix A								
6.10.B Steering stops – in place and functional								

6.7.D Buckles & Straps – no nylon luggage straps		
6.8 Brakes – dual independent and balanced co-reactive		
6.8.A Brake Pads – contact area > 6.0 cm ² , initial thickness >= 6.0 mm		
6.8.C Brake Lines – appropriately sized and constructed		
6.8.D & 6.8.E Pedal Placement - brake pedal activation, spacing between pedals		
6.8.F Hand Brakes – if equipped – lock-to-lock use without repositioning hands		
6.9 Parking Brake – equipped with working parking brake (must hold 10% of vehicle weight in both directions) VEHICLE WEIGHT =		FORWARD PULL: REAR PULL:



Station Manager:

Entrance:

Vehicle disassembled in team pit

Station Grade:

Green = Pass

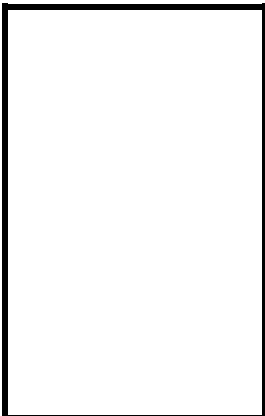
Blue = Needs improvement / FSGP Penalty Condition

Yellow = Needs improvement / Dynamic Test Ready

Red = Fail / Safety Hazard

TEAM:	#
--------------	---

Regulation	Grade	Comments
U-Turn Test		
6.10.C Turning Radius – wheels turn inside 16 m wide lane		RIGHT TURN: LEFT TURN:
Figure-8 Test		
6.3 Tire and Wheel Requirements – all wheels must remain on the ground		
6.2.B no body work shall contact moving structural members		
6.12 Dynamic Stability – vehicles must exhibit sufficient stability during test		
6.12.A Figure 8 – vehicle must negotiate figure-8 course in less than 9 seconds per side w/o hitting cones or showing signs of instability		TIME FOR FIGURE-8:
Braking Test		
6.12 Dynamic Stability – vehicles must exhibit sufficient stability during test		
6.8.B, 6.12.D Braking Performance – vehicle must decelerate from ≥ 50 km/h (31 mph) at > 4.72 m/s ² to a complete stop w/o excessive veering or signs of instability (mechanical braking only)		TIME: SPEED:
Slalom Test		
6.12 Dynamic Stability – vehicles must exhibit sufficient stability during test		
6.12.C Slalom Test – Negotiate slalom course within appropriate time (11.5 s)		TIME: SPEED:
High Speed Stability		
6.12 Dynamic Stability – vehicles must exhibit sufficient stability during test		
6.12.B Stability at Speed – Maintains constant speed in a 3.5 meter lane		SPEED:



Station Manager:

Entrance:

All drivers report to station with car, Green, Blue, or Yellow from Body & Sizing, Electrical, Mechanical, and Driver/Passenger Stations with radio communication

Station Grade:

- Green = Pass
- Blue = Needs improvement / FSGP Penalty Condition
- Yellow = Not available at this station*
- Red = Fail / Safety Hazard