

MECHANICAL	
FUEL CELL SYSTEM	
Name	Toyota Fuel Cell System (TFCS)
FUEL CELL STACK	
Name	Toyota FC Stack
Fuel Cell Stack Type	Solid polymer electrolyte fuel cell
Humidification System	Internal circulation system (humidifier-less)
Power Output	153 HP (114 kW) MAX
Output Density	By Volume: 3.1 kW/L By Weight: 2.0 kW/kg
Cell	Number of cells in one stack: 370 (single-line stacking) Thickness: 1.34 mm Weight: 102 g Flow Channel: 3D fine-mesh flow field (cathode)
Emission Rating	Zero Emissions Vehicle (ZEV)
ELECTRIC MOTOR	
Motor Type	AC synchronous electric generator
Power Output	151 HP (113 kW) MAX
Peak Torque	247 lb-ft (335 N-m)
HYDROGEN TANKS	
Storage Method	Carbon fiber high-pressure tanks
Number of Tanks	2
Type	Type-4
Material	Three layer structure: Inner layer: plastic liner (prevents hydrogen leakage) Middle layer: carbon fiber reinforced plastic (structural element) Surface layer: glass fiber reinforced plastic (protects outer surface from abrasion)
Fuel	Compressed hydrogen gas
Maximum Filling Pressure	87.5 MPa
Normal Operating Pressure	70 MPa (approx. 10,000 psi)
Storage Density (Capacity)	5.7 weight %
Internal Volume	122.4 L Front: 60.0 L Rear: 62.4 L
Hydrogen Storage Mass	Approx. 5.0 kg
Refueling Time	About 5 minutes

DRIVE BATTERY	
Type	Nickel-metal hydride
FUEL CELL BOOST CONVERTER	
Number of Phases	4 phases
Voltage	650V (MAX)
Volume	13 L
POWER TAKE OFF OPTION	
DC Power Output	9 kW (MAX)
Energy Output	Approx. 60 kWh
EPA ESTIMATES	
Fuel Consumption	TBD
VEHICLE	
Cruising Range	Up to 300 miles
Maximum Speed	111 mph
Acceleration Performance	0 – 60 miles: 9.0 seconds
Coefficient of Drag (C_D)	0.29
Cold Start Capability	-22°F (-30°C)

CHASSIS AND BODY	
Drivetrain	Front-wheel drive
Body Construction	Unitized body
Suspension	Independent MacPherson strut front suspension with stabilizer bar and hydraulic shock absorbers; double wishbone rear suspension with coil springs, trailing arms, stabilizer bar and hydraulic shock absorbers (TBD)
Starting System	Electronic Push-Button Start System
Steering	Electric Power Steering (EPS) Power-assisted rack-and-pinion
Brakes	Power assisted ventilated front disc brakes and solid rear disc brakes and Star Safety System™ (TBD)

EXTERIOR DIMENSIONS	
Wheelbase	109.4 in.
Overall Length	192.5 in.
Overall Width	71.5 in
Overall Height	60.4 in
Track (front/rear)	60.4 in. / 60.8 in.
Minimum Running Ground Clearance	5.1 in.
Tires	P215/55R17
Tire Repair Kit (no spare)	

INTERIOR DIMENSIONS - TBD

WEIGHTS AND CAPACITIES	
Curb Weight (lbs.)	4078.5
Seating capacity	4
Passenger volume (cu. ft.)	TBD (FR/RR: TBD / TBD)
Cargo Volume (cu. ft.)	TBD / TBD (behind front / second row)
Gross Vehicle Weight Rating (lbs.)	TBD
Battery Weight (lbs.)	TBD
Fuel Cell Stack Weight (lbs.)	123.5
Hydrogen Tank Weight (lbs.)	192.9

WARRANTY COVERAGE

- 8-year/100,000-mile Fuel Cell System
(FC Battery Pack, Battery ECU, FC Air Compressor, FC Boost Converter, FC ECU, H2 tanks, FC PCU (Power Control Unit), FC Stack, HF ECU (H2 Fueling ECU), and Power Management ECU (HV ECU))
- 5-year/60,000-mile Other Powertrain Components
- 3-year/36,000-mile Basic