Background

MUTE Project – Technische Universitaet Muenchen – Data sheet

Class	Subcompact Car
License	L7E (4 wheels, max. 15 kW, max. 500 kg)
Passengers	2
Payload [kg]	200
Gepäckvolumen [l]	510 liter loadspace (2 pieces of luggage)
TCO	Equivalent to comparable compact car
Target market of current configuration	Central Europe
Wheel base [m]	2,10
Wheel gauge front [m]	1,40
Wheel gauge rear [m]	1,45
Length [m]	3,55
Width [m]	1,55
Height [m]	1,31
Mass [kg]	400 (plus 100 Battery)
Engine	E-motor (synchronous), rear wheel drive
Motor power [kW]	15 (at the wheel, according to license class L7E)
Gearbox	active torque vectoring differential
Recuperation	Yes – e-motor and torque vectoring system
Maximum speed [km/h]	120
Acceleration 0-60 km/h [s]	6,8
Range [km]	100 (minimum)

Technische Universitaet Muenchen Corporate Communications Center 80290 Munich, Germany www.tum.de
Dr. Ulrich Marsch Head of Corporate Communications +49 89 289 22778 marsch@zv.tum.de
Dr. Andreas Battenberg PR Campus Garching +49 89 289 10510 battenberg@zv.tum.de

Energy storage	Li-Ionen-Accumulator (1232 cells of type 18650), weight 70 kg, capacity 10 kWh, max. 380 V
Charging time at 230 V [h]	ca. 3 – 4
Range extender (for additional range)	Zinc/air-battery (recyclable), capacity: 4 kWh (40% additional range)
Frame	Aluminum
Body	Fiber-reinforced plastics
Crash-protection system	fiber reinforced composite crash boxes
Aerodynamics	C_d-value: 0,27, cross sectional area: 1,69 m^2
Chassis	McPherson-axles
Weight distribution f/r [%]	45/55
Safety concept	fiber reinforced composite crash boxes, active torque vectoring, ESP, ergonomically optimized driver assistance systems, restraint systems
Air conditioning	Bioethanol-heating, ventilation, coupling with thermal management of the battery
Lighting	LED headlights
Driver assistance systems, entertainment	• Central display of speed and range • Aggregation of all tertiary information (radio, navigation, ...) on a central touch screen (like an iPad) • Touch pad ready to serve as output medium for additional server-based services
Special features	• eye fixed-point concept to provide good overview for all drivers • high-voltage on-board power network partly made from aluminum • innovative power management for the battery

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Dr. Andreas Battenberg	PR Campus Garching	+49 89 289 10510	battenberg@zv.tum.de