

i MiEV

Mitsubishi innovative Electric Vehicle



Environmentally Friendly Vehicles that Mitsubishi Motors Corporation(MMC) aims for

“Driving Pleasure”, “Safety” and “Environment-Friendliness” are the short-range goals that MMC strives for as a manufacturer.

MMC has built an environmentally friendly Electric Vehicle (EV) “i MiEV” based on the “i” minicar, which is popular for its unique layout. “i MiEV” is a research vehicle filled with MMC’s innovative technology including high capacity lithium-ion batteries, a small, high performance motor and so on.

Using this “i MiEV”, MMC will begin joint research programs and fleet monitoring tests with power companies and collect field test data to improve the EV for the future commercial application.

Let’s have a look at some of the MMC’s innovations on board the “i MiEV”, and the MMC approach to promote the diffusion of EVs.

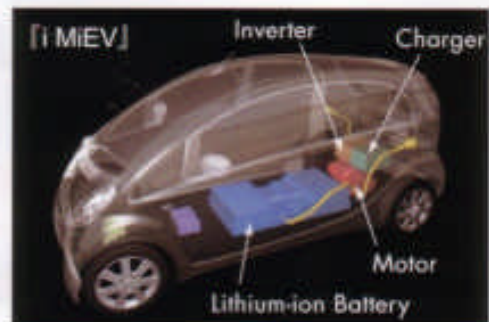
i MiEV Four "innovations"



1 The optimum packaging for EVs

Based on the "i" minicar's rear-midship layout platform, "i MiEV" replaces the conventional engine and fuel tank with a lithium-ion battery system, motor, inverter and other EV components.

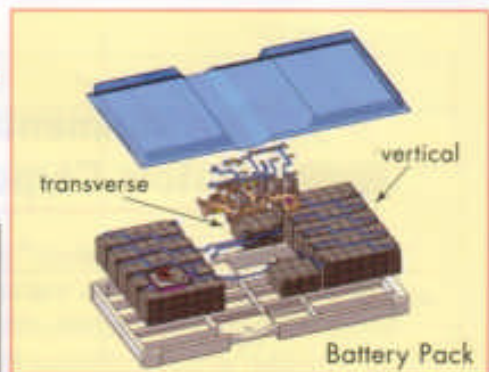
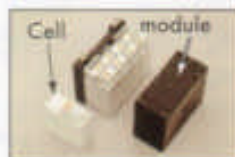
The long wheelbase, a feature of rear-midship layout, provides space for high capacity lithium-ion batteries under the floor. It also enables the motor and inverter to be installed in the space that used to house the conventional engine and transmission. "i MiEV" ensures ample cabin space for passengers (4-occupant capacity) and reasonable luggage compartment space in the rear. The installation of batteries under the floor make the "i MiEV"'s gravity center low, which provides a more stable driving dynamic.



2 High capacity lithium-ion battery

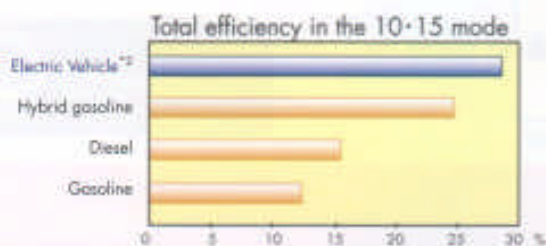
EV batteries must have high energy density. "i MiEV" utilizes high energy density lithium-ion batteries. A module consists of 4 cells, and 22 modules make one battery pack. Each high capacity battery module can fit under the floor panel regardless of the position, vertical or transverse.

Our targets of cruising distance are 130km for the joint research vehicle in FY2006, and 160km for fleet test vehicles in FY2007 (Driving pattern:10-15 mode).



Total Energy Efficiency

- EV is the most energy efficient (Well to Wheel *1)

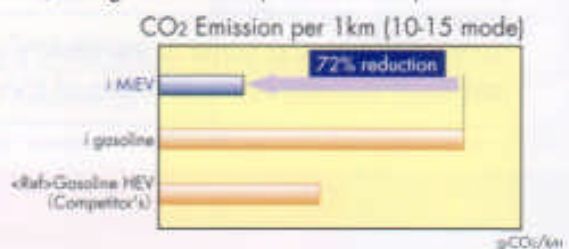


*1 : Total energy efficiency in fuel life: from mining to consumption of resultant fuel.
*2 : This data is based on the power supply mix in Japan.

Ref. JHFC Seminar 2005

CO₂ Emission

- CO₂ emission from EVs is : 1/4 of gasoline vehicle, 1/2 of gasoline HEV. (Well to Wheel)



gCO₂/km

i MiEV For the practical application of EVs



Joint research with power companies

For the diffusion of EVs, infrastructure development is as important as developing the car itself. MMC will begin joint research with some power companies in November 2006. By testing "i MiEV", the power companies will evaluate how the vehicle applicable to their business and how fast-charge infrastructure may be developed for EVs. In the autumn of 2007, MMC will begin fleet testing in order to verify the vehicle's technical capabilities in daily use and to evaluate market acceptability in collaboration with the power companies.

Through this joint research, MMC hopes the future commercial application of EVs.

Joint Research with Power Companies

2006	2007	2008
November	Joint Research	
	Autumn	Fleet Test

Purpose and Contents		
FY2006	Joint Research	Study of EV for business in power companies
		Research test for practical use on quick charger and its infrastructure
FY2007	Fleet Test	Driving under actual conditions (temperature tolerance, etc.)
		Survey of market acceptability (charging time, utility etc.)
		Technical data gathering and analysis

Outlook of [i MiEV]



Specifications

Overall length x width x height		3395 x 1475 x 1600 mm
Curb weight		1080 kg
Seating capacity		4
Max. speed		130 km/h
Cruising distance with a single charge (Driving pattern: 10-15 mode) (Target)		130 km/160 km *
Motor	Type	Permanent magnet synchronous
	Max. power	47 kW
	Max. torque	180 N•m
Drive system		Rear wheel drive
Battery	Type	Lithium-ion
	Total voltage	330 V
	Total energy	16 kWh / 20kWh *

*Vehicles for the joint research in FY2006./Vehicles for the fleet monitoring test in FY2007.



