

Prototype Micro Fuel Cell for 3G FOMA Handsets

October 1 2004



NTT DoCoMo, Inc. announced today the joint development of a **prototype micro fuel cell for 3G FOMA® handsets**. The prototype, manufactured by [Fujitsu](#) Laboratories Ltd., is expected to **greatly extend FOMA handset usage time** once it goes into commercial production.

The micro fuel cell is aimed at meeting user demands for more convenient handsets with greater power capacity, as well as reduced environmental impact.

Power consumption demands are rising as FOMA users take advantage

of new services and handset features, including flat-rate monthly billing for data services, such as i-motion™ and i-appli™, and videophone. DoCoMo is addressing this issue in part by increasing the capacity of its lithium-ion batteries, the most commonly used battery in handsets today.

The micro fuel cell is a standalone device shaped like a cradle for recharging handsets. It generates electric power by combining hydrogen and cheap, environmentally harmless methanol to produce a chemical reaction. Hydrogen ions are extracted from the air via a layer sandwiched between positive and negative electrodes.

The prototype has the same basic specifications of other FOMA handset rechargers and will be compatible with all FOMA handsets. Further development of the prototype is expected to be completed by the end of fiscal 2005.



FOMA handset
attached to
micro fuel cell

Main Specifications of Prototype Micro Fuel Cell

Height x width x thickness	152 x 57 x 16 mm
Size (volume)	180 cc
Weight	190 grams
Fuel	Methanol (18 cc, 30% concentration)
Number of Recharges	1 per methanol cartridge
Design	Desktop holder
Output	5.4 V, 700 mA (same as other FOMA rechargers)

Citation: Prototype Micro Fuel Cell for 3G FOMA Handsets (2004, October 1) retrieved 4 June 2024 from <https://phys.org/news/2004-10-prototype-micro-fuel-cell-3g.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.