

World's Smallest Direct Methanol Fuel Cell By Guinness World Record

March 1 2005

Toshiba Corporation, the world leader in fuel-cell technology for handheld electronic devices, today announced that Guinness World Records has officially certified its highly compact direct methanol fuel cell (DMFC) as the world's smallest DMFC. The fuel cell will feature in the 2006 edition of Guinness World Records, the perennially popular compendium of record-breaking feats and achievements.

Designed for integration into devices as small as digital music players, Toshiba's DMFC is as long and wide as a thumb, only 22 x 56 x 4.5mm (maximum of 9.1mm with fuel tank). This size advantage offers greater design freedom to developers of handheld electronic devices, without any compromises in performance. Although small enough for integration into a wireless headset for mobile phones, the prototype is efficient enough to power an MP3 music player for as long as 20 hours on a single 2cc charge of highly concentrated methanol. The DMFC outputs 100 milliwatts of power, and can continue to do so, non-stop, for as long as users top up its integrated fuel tank—a process that is as simple as it is safe.

Commenting on today's announcement, Kazunori Fukuma, Managing Director of Display Devices & Components Control Center of Toshiba Corporation stated, "We are really honored and delighted that an organization as respected as Guinness World Records has certified our fuel cell as the world's smallest DMFC. This is welcome recognition of our efforts to stay a step ahead of our competitors in fuel cell miniaturization and operating efficiency. We will continue to develop

even more compact, more efficient DMFC that can power the smallest portable devices on the market."

David Hawksett, science and technology judge at Guinness World Records said "Today's gadgets, with their color screens and powerful processors, are pushing battery technology to its limits. This portable power station will allow us all to use our mobile technology without having to stay within a few miles of a mains socket!"

Toshiba plans to introduce commercial samples of the world's smallest DMFC for small handheld electronic devices in 2005.

Citation: World's Smallest Direct Methanol Fuel Cell By Guinness World Record (2005, March 1)
retrieved 25 April 2024 from
<https://phys.org/news/2005-03-world-smallest-methanol-fuel-cell.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.