

NEW TECHNOLOGY PIPES DAYLIGHT INTO WINDOWLESS ROOMS



Innovative technology from [Sunportal](#), a recent South Korean and British joint venture, promises to deliver natural daylight to windowless spaces through a series of high-tech pipes, without heat gain or loss.

A mirror tracks the sun throughout the day, reflecting its rays onto a parabolic dish, which then focuses the reflected daylight into a small 'light pipe' aperture. The concentrated light then travels through a series of relay lenses "over any distance and in any direction", according to the company. A diffuser ensures that light evenly reaches the desired areas.

The patented Sunportal offers luminance beginning at 80lux and peaking at 500lux (one lux is equivalent to light intensity during early twilight). What happens when the sun gets too faint? An integrated high-efficiency LED light kit, which can be connected to the mains, kicks in.



Founded last year after five years of research and development, and funded by CEO Tony Han, the company has already implemented its large commercial-scale technology (CS version) in three industrial locations in South Korea. Among them are the [POSCO Steel Mill](#) in Pohang and the Chungpyung Pumped Storage Plant, both of which were looking to replace older lighting systems. Dong Gyu-Oh, POSCO's Plant Facilities Manager, declared the system was "a major asset for energy saving as well as for our environmental policy".

Sunportal has also managed to secure two major contracts in office buildings in Spain and Austria.

Jong H. Kim, its Global Sales and Marketing Director, estimates that the technology will lower energy costs by an average of 20-25%. He also claims the natural light will have a beneficial impact on workforce productivity, citing a study by the [US National Renewable Energy Laboratory](#).

Source : <http://thisbigcity.net/new-technology-pipes-daylight-into-windowless-rooms/>