

## SINGAPORE Tampines

Tampines Mart  
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Tampines Mart is a shopping centre in Singapore based on an open space concept. While the stores are air-conditioned, all the aisles or walkways are open. The centre concourse area features the building's architectural centrepiece, a spectacular 14 meter high glass dome which is actually 12 meters in diameter. It is also shaped like a cone and is responsible for letting in most of the natural light throughout the day. Architectural aesthetics aside, this also translates to about 30,000 watts of transmitted heat continuously admitted and trapped in the concourse.

With the intense heat, the building management encountered complaints from promotional staff, who refused to promote their products beneath the concourse in the daytime. On the second floor, sales staff at Pertama Electronics, complained not only of the sun's heat neutralizing the strong air-conditioning but were concerned over the damage inflicted on their sensitive electronic merchandise.

Faced with these problems, the Tampines Mart management started to review options to lower heat gain through the glass dome that met their budget and aesthetic constraints. One option was to change the glass panels to IGU's (insulated glass units) but this was cost-prohibitive and the improvement in solar performance, nominal. Application of conventional metalized and dyed films were also not favoured as the reduced visible light transmission meant a darkened interior. Aesthetically, dark glass was also not favoured as it altered the integrity of the architect's original design. The solution finally arrived after a demonstration of V-KOOL's spectrally-selective performance by V-KOOL® Singapore. Cindy Ong, Manager of Tampines Mart, decided that the high visible light transmission and the unparalleled 94% infra-red and 98% ultraviolet rejection was an ideal solution for the skylight. V-KOOL(Singapore) was immediately commissioned to install V-KOOL for the entire glass dome, totalling about 2,000 FT<sup>2</sup>.

Upon completion of the V-KOOL installation on the glass dome, Tampines Mart management and Pertama store staff reported a resounding and unanimous conclusion was that it was a "much cooler and comfortable concourse". V-KOOL(Singapore) is very pleased to have assisted Tampines Mart in solving their heat problem.

## AT A GLANCE

PROJECT NAME	Tampines Mart
SITE	Singapore
COMPLETED	1996



INTERNATIONAL HEAD OFFICE  
V-KOOL International  
PSB Science Park Annex,  
#02-19, 3 Science Park Annex  
Singapore 118223  
[www.v-kool.com](http://www.v-kool.com)

USA HEAD OFFICE  
V-KOOL, Inc.  
1735B Northwest Freeway  
Houston, Texas 77040  
[www.v-kool-usa.com](http://www.v-kool-usa.com)

