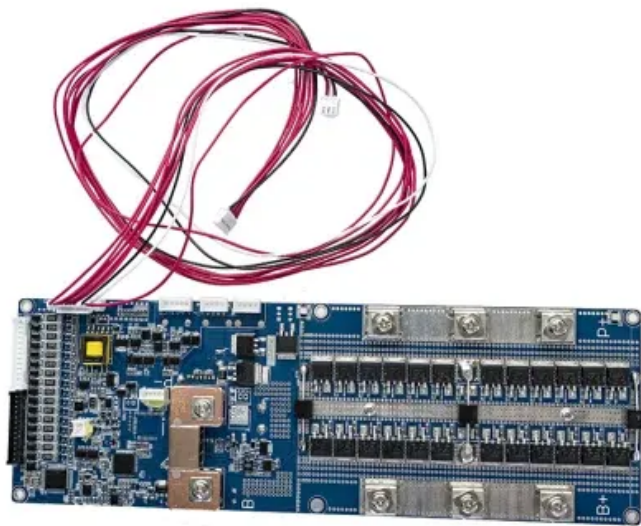


# **Daylight solar energy Hong Kong**





## Daylight solar energy Hong Kong

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### Total Energy Performance of Atria with Daylight

The annual total energy consumption of atrium spaces with daylight-linked lighting controls were about 20 to 40% higher than the base case design. This indicates that energy savings from artificial lighting generally cannot compensate

### Daylighting in Hong Kong: Potential and problems

Hong Kong has a high potential of utilizing daylight for saving electric lighting energy as the outdoor horizontal illuminance exceeds 10 000 lux for over 80% of the normal office hours in



### Climate-based Daylight Modeling for Energy Efficient Building ...

- o Estimate daylight quality for health
- o Integrate control system/strategies into simulation
- o Model human behavior to estimate energy saving
- o Enhance simulation speed and accuracy

### Vertical solar radiation and daylight illuminance data for Hong Kong

This paper describes the vertical solar radiation and daylight illuminance measurement made from 1996 to 1998 at the City University of Hong Kong and reports some of the general findings.



Data analysis is carried out using frequency of occurrence and cumulative frequency distribution methods.



### **A study of luminous efficacy of daylight in Hong Kong**

The present work is an experimental study of the luminous efficacy of daylight in Hong Kong. Daylight illuminance and solar irradiance were measured on the horizontal surface at intervals of one hour from December 1989 to March 1991.

### **SOLAR RADIATION AND DAYLIGHT ILLUMINANCE MODELLING**

daylight-linked lighting controls and BIPV systems, and evaluates the design implications for BIPV systems in energy, environmental and financial terms. The data measurements include the long term seven-year horizontal solar radiation and daylight illuminance (global and diffuse components), vertical solar radiation and



### **Daylighting in Hong Kong: potential and problems**

Daylight availability in Hong Kong is described based on routinely measured hourly global horizontal solar radiation data and studies of luminous efficacy in Hong Kong. Frequency analysis of these derived exterior illuminance data gives the potential energy savings from daylight-linked on-off or top-up controls.



## A Study of Solar Radiation Daylight Illuminance and Sky ...

This paper describes solar data measurements made at the City University of Hong Kong and reports some of the general findings. The daily and hourly average values of solar radiation and daylight illuminance are computed and presented using graphical methods.



## Daylight availability in Hong Kong and energy implications

Regression analysis of the measured data indicates that both global and diffuse illuminance can be correlated with solar altitude under different sky conditions. Cumulative frequency distributions of outdoor daylight availability suggest that in more than half of the working year, daylighting alone can provide adequate lighting level in the

## A Study on Daylight Distribution and the Associated Heat Gain of ...

The solar irradiance obtained from the daylighting simulation is input to a two-node thermal model for energy simulation. The indoor air temperature profile, cooling and heating load



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