

## **Skyvault Series M&4 Double Dome Open - Ceiling Prismatic – Security Guard**

### **Recommended Specification**

**SkyVault Series: M74 DS - Open Ceiling, 724 mm (Tube ID) Daylighting System  
manufactured by Solatube Australia PTY LTD**

#### **CAPTURE ZONE**

##### **Roof Dome Assembly:**

Transparent, UV and impact resistant dome with flashing base supporting dome and top of tube.  
Fasteners: Non-corrosive metal fasteners including: non-magnetic stainless steel, zinc plated steel, aluminum, or injection molded nylon.

##### **Dual Dome Glazing:**

a. Outer Dome Glazing: Type DP, 0.125 inch (3.2 mm) minimum thickness vacuum formed polycarbonate classified as CC1 material; UV inhibiting (Blocks all radiation <380nm: 100 percent UVC, 100 percent UVB and 76 percent of the range of UVA transmission).

Inner Dome Glazing: Type DPP, 0.040 inch (1 mm) minimum thickness copolyester (PETG) polyethylene terephthalate with glycol classified as CC1 material.

##### **Security Guard:**

Type SG, welded powder coated steel or stainless steel rods 6mm diameter mounted with an 200mm maximum cross section. Assembly fastened with 3mm diameter blind rivets in 6 locations to Curb-Cap assembly. Use non-removable machine screws dome screws. This is standard as required by OH&S

##### **Flashing Base:**

Curb Cap One piece, seamless, leak-proof flashing and base support for dome and top of tube and cap flashing. Fabricated of galvanized steel.

#### **TRANSFER ZONE**

##### **Tubing :**

Attached to top of curb-cap section; 0.45 mm nominal thickness aluminum.  
Spectralight Infinity high reflectance specular finish on exposed reflective surface. Specular reflectance for visible spectrum (400 nm to 760 nm) greater than 99 percent. Total solar spectrum reflectance (400 nm to 2500 nm) less than 80.2 percent.

##### **Tube joining straps:**

Aluminum sheet, thickness 0.5 mm with Tab-Lock tube joint structural connection system.

#### **DELIVERY ZONE**

##### **Diffuser**

Assemblies for Tubes Not Penetrating Ceilings (Open Ceiling): Solatube Model M74 DS-O. 724 mm diameter prismatic diffuser attached directly to bottom of tube.

## ACCESSORIES:

SELECT REQUIRED

**Skyvault Collector** – for increased Daylight delivery – redirects low-angle light downward while filtering out the heat of infrared rays. Check availability Australia.

**Skyvault Amplifier** – for high structures generally above 15m floor to ceiling/roof where daylight is required to be directed/focused all the way down to the task/work plane level. Can be used on other structures less than 15m. Check availability Australia.

**Thermal Insulation Panel** - Provides unmatched thermal performance. Two climate control discs paired with polycarbonate ring prevent conductive and convective heat transfer. Spectralight® Infinity material inside ring maximizes light transfer. Check availability Australia

### Daylight Dimmers.

Low voltage Daylight Dimmer – Electro-mechanically actuated daylight valve, 0-10V control, Class2, UL listed. Dimming control for Daylight between 2 and 100%.

**Daylight Dimmer Switches** – Low Voltage 0-10V Class2 switch (white) required to operate 0-10V Daylight Dimmer.

**Trim Ring** - provides a finished appearance to the installation, covering the cut edge of the roof deck penetration in an open ceiling application. Check availability Australia.

### Wire Suspension Kit

Use the wire suspension kit when additional bracing to the structure is required.

### Performance Tested:

NFRC (National Fenestration and Ratings Council). Meets SHGC and U-Value requirements set out in the BCA (Building Code of Australia) tables 3.12.1.2 and J1.4.

**SHGC = 0.28** – Cert #5006

NFRC TEST Results SHGC

The **SHGC** is the fraction of incident solar radiation admitted, both directly transmitted and absorbed and subsequently released inward.

It is expressed as a number between 0 and 1. The lower a SHGC, the less solar heat it transmits.

**U-Factor = 6.02** – Cert #5006

NFRC TEST Results U Factor (these are imperial measurements and must be converted to metric by multiplying by 5.687)

The rate of heat loss is indicated in terms of the **U-factor (U-value)**. The lower the **U-factor**, the greater resistance to heat flow and the better its insulating properties.

**Annual average VLT = 0.52** – test report E1047.11-301-41

The amount of light transmitted is specified by the visible light transmittance(VLT) Rating vary between 0 and 1. The higher the value, the better.

**Light-to-Solar Gain** – (The ratio of the visible light transmittance to the Solar Heat Gain Coefficient.  $LSG = T_{vis}/SHGC$  A higher LSG ratio means sunlight entering the room is more efficient for daylighting, especially for summer conditions where more light is desired with less solar gain) =  $0.52/0.28 =$  and **LSG of 1.86**

**FM Approval – Solatube SolaMaster Series have FM Approval** - FM Approvals verify that products meet rigorous loss prevention standards of quality, technical integrity and performance —for use in commercial and industrial facilities **FM approval information** - link to STI website.