

SolaMaster 750DS Open Ceiling Specification

SolaMaster 750DS (530mm diameter) Daylighting System with a Round Open Diffuser. Manufactured by Solatube Australia PTY LTD

S750DS-O-DA-DAI-L1

Roof Mounted Tubular Daylighting System with Raybender Dome, UV and Impact resistant Inner Dome that aides to providing high thermal performance, Spectralight Infinity 99.7% Spectral reflectivity solid tubing with ceiling level round diffuser assembly, transferring sunlight to interior spaces.

CAPTURE ZONE

ROOF DOME CONFIGURATIONS

Select

Double Roof Dome: Raybender 3000 variable prism optic moulded into outer dome to capture low angle sunlight and limit high angle sunlight with Type DA Transparent, UV and impact resistant inner dome. 3.7 mm minimum thickness injection moulded acrylic, classified as CC2 material; UV inhibiting, impact modified acrylic blend.

OR

Single Dome Assembly Raybender 3000 variable prism optic moulded into outer dome to capture low angle sunlight and limit high angle sunlight - 3.7 mm minimum thickness injection moulded acrylic, classified as CC2 material; UV inhibiting, impact modified acrylic blend.

Flashing:

Flashing base supporting dome and top of tube as per manufacturers recommendations to suit roof profile.

TRANSFER ZONE

Tubing - 99.7% Spectrally Reflective Tubing:

Aluminium sheet, thickness 0.5mm. Top Tube Angle Adapter, 406 mm long. Spectralight Infinity 99.7% high reflectance specular finish on exposed reflective surface. Visible spectrum (400 nm to 760 nm) greater than 99 percent. Total solar spectrum (400 nm to 2500 nm) less than 93 percent.

Tube Angle Adaptors

Select if required

Top Tube Angle Adaptor – TYPE TA, Reflective 45 degree adjustable Top Tube Angle Adaptor. 406mm

Or

Bottom Tube Angle Adaptor – TYPE TB, Reflective 45 degree adjustable Top Tube Angle Adaptor. 406mm

Or

Top and Bottom Tube Angle Adaptors – TYPE AK, Reflective 45 degree adjustable Top and Bottom Tube Angle Adaptors. 406mm

DELIVERY ZONE

ROUND Diffuser:

Select

Type L1 – Optiview Fresnel lens design to maximise light output and diffusion. VLT shall be greater than 90% at 0.6mm thick Classified CC2

OR

Type L2 - Prismatic lens design to maximise light output and diffusion. VLT shall be greater than 90% at 0.6mm thick Classified CC2

ACCESSORIES:

SELECT REQUIRED

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.

Bushfire Kit

Solatube TDD Bushfire protection Kit, consisting of reinforced A Grade Glass Wire with powder coated steel support ring, and fire related acrylic sealant (existing in assembly), Suitable for use up to BAL29. (maximum)

Wire Suspension Kit

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

LED Light Kit

Including Driver and light engine two piece field assembly, bracket mounted inside. Electrical input (AC) 100-240V, CCT4000K, CRI80, 10,000 Delivered Lumen.

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.

With Inner Dome –

Optiview Diffuser – SHGC = 0.22

Prismatic Diffuser – SHGC = 0.23

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 = 7.15 (Optiview and Prismatic Diffuser)

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 = 0.47 – test report G3705.02-301-41

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) = $0.47/0.22 =$ and **LSG of 2.14**

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.