



Winston Series CPC Model WSC-0503 ENGINEERING SPECIFICATIONS

The Winston Series CPC is a Compound Parabolic Collector utilizing non-imaging optics to focus sunlight onto a high efficiency absorber tube. The CPC is a flat plate un-evacuated single glazed collector.

The dimensions of each collector shall be 82.44 inches in length by, 41.77 inches in width and 3.31 inches in height.

The enclosure box frame wall shall be an aluminum extrusion (alloy: 6063 T6), with mill finish.

Mounting hardware shall clip to the collector frame wall without the aid of any frame wall penetrations, and shall be certified to a wind loading of more than 180 mph (94 psf). The collector back sheet shall be not less than 0.5 mm / 0.019 inches thick, stucco embossed aluminum. Glazing shall be one sheet of low iron tempered glass, minimum 03.2mm / 1/8 inch thickness, and a minimum total solar transmissivity of 91%.

Insulation shall be polyurethane foam filled completely on back, between reflectors and side, Absorber risers (receiver) tubes shall be 3/4" copper receiver type M copper and Header shall be 1" copper type M Absorber is a Header and Riser flow with brazed connections.

Absorber coating shall be Selective Electro-plate coated (Black Crystal[®]), with an absorptivity of 0.95 ±5% and an emissivity of 0.07% -.10%. Or Semi-selective painted coating manufactured by SOLEC.

Collector instantaneous efficiency curve shall not have less than a first order y intercept of 0.782 and a slope of not more than .81

Collector shall incorporate non-imaging optics with a polished aluminum reflector

Collectors shall be warranted for ten years, including a limited 10-year warranty against corrosion of the absorber tubes.

FSEC and SRCC Certification # Pending

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