CANDEN PRODUCTS

GC3 Bench-Top Plant Growth Chamber

Technical Specification | Model GC3

Core Technical Specifications

Parameter	Specification
Temperature range	10°C to 50°C (lights on or off)
Temperature uniformity	±2°C
Temperature control at sensor	±1°C
Control resolution	±0.1°C
Humidity range	50% RH to 90% RH; down to 30% RH available with desiccant dehumidifier
Humidity control	±3%
Cooling / heating	Thermoelectric / Peltier driven heating and cooling
Chamber volume	3 cu. ft. / 84 L
External dimensions (L x W x H)	27" x 24" x 23.5"
Internal dimensions (L x W x H)	21" x 13.5" x 20"
Cabinet	Durable polyethylene construction with CFC-free polyurethane insulation
Electrical	115 V / 60 Hz / 1 Ph / 3 A; standard wall outlet
Shelving	2 standard; additional available; PVC-coated wire or stainless steel; 13" x 19"
Weight	Chamber: 35 lb; shipping: 50 lb

Lighting System

Lighting Parameter	Specification
Standard chamber lighting	3 LED lights standard
Light output	100 µmol m-2 s-1 standard; optional up to 300 µmol m-2 s-1
Timer / control	JVR timer - ON/OFF; multiple timer settings per day / 7 days per week
Dimming	Optional PWM manual light dimming
Light bank model	Canden CP03 LED light bank
Color	Black cable - Daylight White 5000K
Material	Plastic end caps, PC diffusers, aluminum
Light source	LED
Finish	Natural anodised
Shade	Polycarbonate / white
Voltage	12 VDC / 24 VDC
Shape	Linear
Wattage per light	31 W
Brightness	2000 lumen
Mounting	Surface mounting
Area classification	IP20
Plug	Standard US plug
Color temperature	5000 K
CRI	80.00
Bulb length	12 in.
Lumen maintenance factor at end of life	0.7

Humidity System & Water Quality

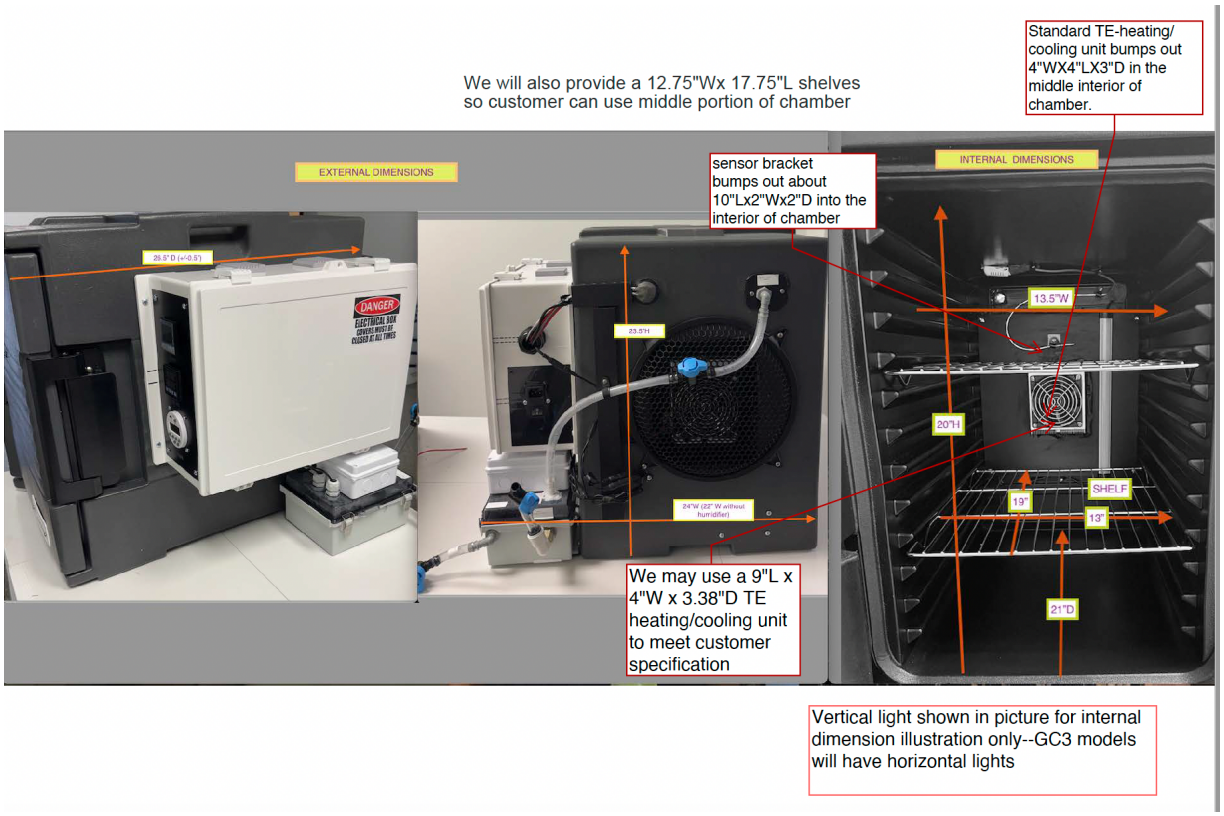
Humidity range is achieved via additive ultrasonic humidification, a controller with with factory calibrated %RH sensor. Humidifier is installed typically in the rear of the chamber and can be easily serviced or replaced. RO/DI system is recommended but not required as long as the water quality specification is met. Tap water should be fine. The humidifier comes with a 15' 1/2" polytube, shut off valve and quick disconnect fittings as well as a fitting to connect to water faucet.

Water operating pressure	5 to 10 psi
Water type	Deionized (DI) or Reverse Osmosis (RO) water
Target TDS range	15 ppm to 50 ppm
Conductivity range	30 µS/cm to 100 µS/cm
pH range	Neutral (6.5 to 7.5)

Chamber Features

Digital Watlow, Fuji or equivalent PID temperature control and display with precision PT100 RTD temperature sensor and RH sensor. UL-listed parts. Two-inch CFC-free insulation supports thermal performance. Thermoelectric/Peltier heating and cooling eliminates a conventional compressor-based refrigeration system and reduces mechanical components and maintenance requirements. The chamber is designed for quiet operation.

Product Dimensions



Options: chart recorder; additional shelving; outlets; extended temperature ranges; RO/DI water filtration system; water carboy; dehumidifier.

Note: Extended temperature and humidity ranges will incur additional cost.

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Specifications are based on 20°C ambient and standard voltage. Specifications are subject to change without notice.