Noritake **CLB－DIR631**

Far Infrared Precise Isothermal Oven

Excellent technology
Engineering
Electronics
Ecology
4e innovated the heating process

The oven which use far-infrared heating and hot-air circulation in combination. Processing time can be greatly reduced in heating of the polymer materials etc. which absorb far-infrared easily.

It can also be used as a heat-treatment equipment for wide range of application as each of far-infrared heater and hot-air circulation can be used independently.

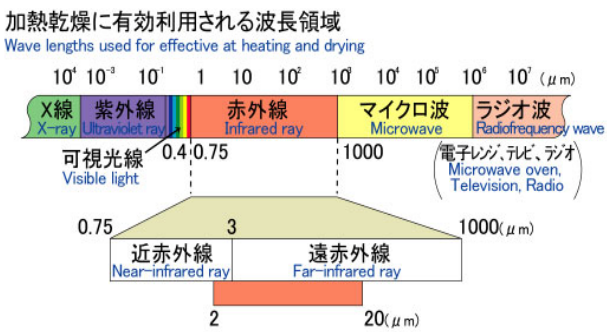
Temperature : R.T. +10～360 ℃

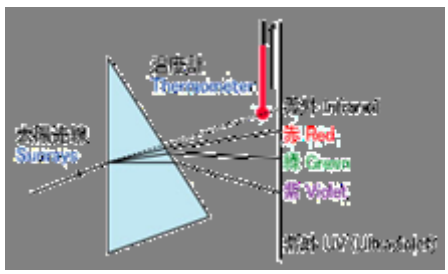
Temperature precision : ± 3 ℃ (at 360℃ hot air circulation)

Heating method :
Far-infrared heating + Hot-air circulation

＜What is "Far-infrared"＞

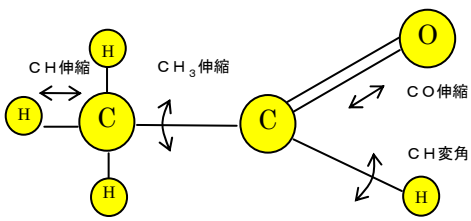
Far-infrared is a part of infrared, a kind of light/electromagnetic wave. And its wavelength is especially from 3 to 100 μm. Far-infrared can heat well and penetrate materials such as water, plastic, coating liquid and electronic paste, which absorption wavelength is in 2 to 20 μm.





＜Heating principle of "Far-infrared"＞

All molecules consisting material move complicatedly and molecules moving hard has high temperature. When electromagnetic wave which matches oscillation frequency of this motion is radiated to material, the material absorbs this electromagnetic wave and move harder, and temperature will rise.



Available for highly precise temperature control and wide range of thermal application.
Good for a variety of heating tests

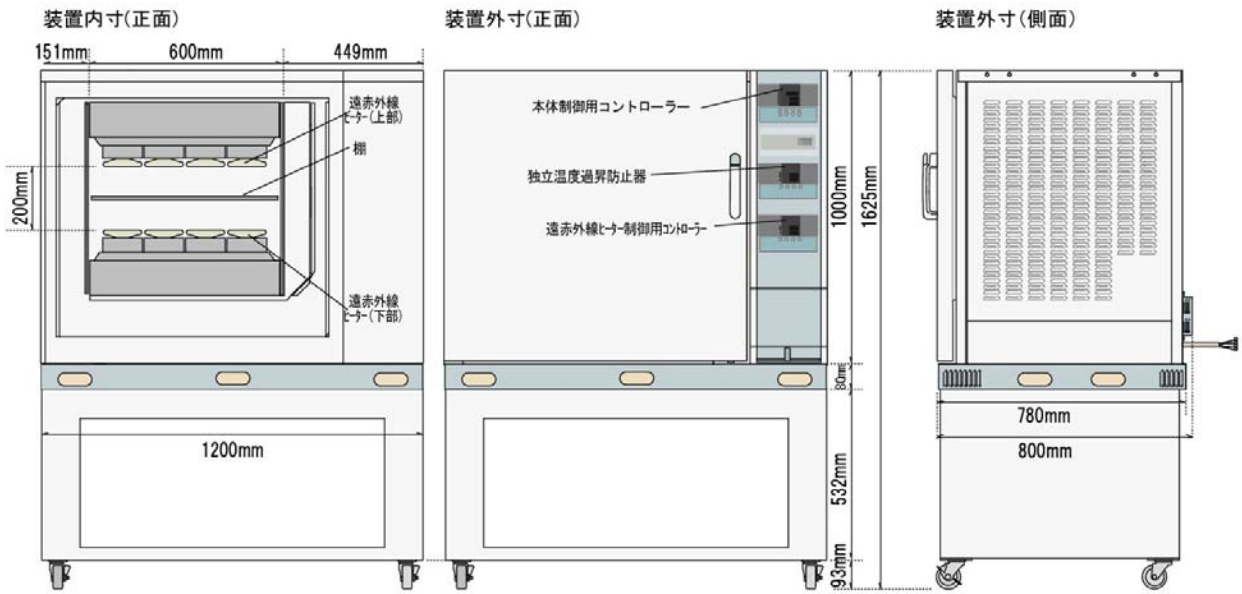
＜CLB－DIR631＞

■Specifications

■Model	CLB－DIR631
■Method	Far-infrared + Hot-air circulation
■Performance(Unloaded Condition)	
Temperature range	Room temperature＋10～360℃
Temperature control presision	±0. 2℃(at 360℃, Far-infrared heater off)
Temperature distribution precision	±3℃(at 360℃, Far-infrared heater off)
Time to attain max. temp.	100min (to 360℃, Far-infrared heater off)
■Structure	
Inner wall	Stainless steel SUS304
Outer wall	Cold rolled steel plate melamine resin baked finishing
Heat Insulation material	Ceramic fiber
Heater	Far infrared ceramic heater PLC-322(0.2kw ×16 sheet ×2 sides(upper and lower) Total 6.4kw) Stainless pipe heater with fins(3.75kw)
Blower motor / fan	20w Condenser type motor / Axial flow fan
■Controller	
Temperature control method	PID control by microcomputer
Operation function	Fixation operation, Quick auto stop, Auto stop, Auto start
Additional functions	Calibration offset function, Key-lock function, Power failure compensation function, Door switch
■Safety functions	
	Short circuit breaker : Leakage, Short circuit, Over current protection Excess heating protector : Cutoff of heater during heating stage Self-diagnosis function : Temperature abnormality, Heater disconnection, SSR abnormality, Independent excess heating protector, Short circuit breaker

■Dimensions / Utilities

■Model	CLB－DIR631
■Standard	Width ×Depth ×Height
Inner dimension (mm)	600×600×600
Outer dimension (mm)	1200×780×1625
Power source(200V)/electric current (A)	3 phase 200V 50／60Hz 34A
Weight (approx. kg)	230kg



※ The contents of this catalog is subject to change without prior notice.

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