

One vision, Two sharp eyes with Our Innovation

# TR-4000

## Auto Refractometer

Fast & Accurate Objective  
"Dual CCD" Technology



Dual CCD  
Technology Measurement  
Cataract & IOL Mode  
Adjustable Vertex Distance  
Automatic PD Measurement  
Stand-By (Sleep) Function

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# TR-4000

Auto Refractometer

## Automatic Refraction Measurements

The TOMEY TR-4000 Auto Refractometer provides highly accurate measurement of patients' refractive error. This measurement is obtained simply by pushing a button. Patient alignment is simple & effortless with the joystick controller. The TR-4000 automatically calculates interpupillary distance (PD) based on the patient's alignment.

## Fast & Accurate Measurement

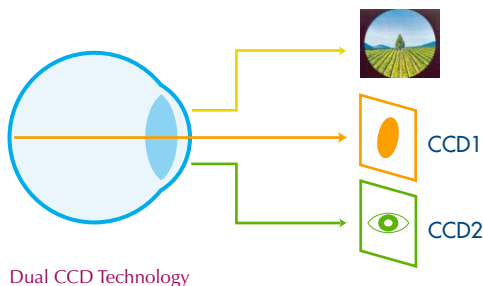
With dual CCD cameras for accurate, reliable & repeatable measurements, the TR-4000 offers a fast (0.3 seconds) measurement time & unique multi-averaging refraction readings.

## Data Output

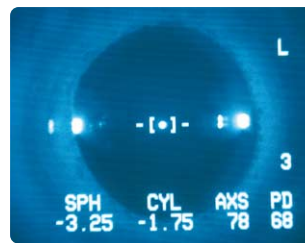
Refraction results are immediately available on-screen & from the system's quiet, built-in, high-speed printer. Results can also be transferred to the office database via the integral RS-232C connection.

## Power Saving Features

The stand-by, or sleep, mode is automatically activated after five or ten minutes(operator selected) of idle time. This reduces power consumption, resulting in operating cost savings & increases the overall lifetime of the TR-4000. Simply push the joystick button to reactivate the device.



Dual CCD Technology



Monitor Image

## TR-4000 SPECIFICATIONS

### Measurement Ranges

Sphere  $\pm 20D$   
Cylinder  $\pm 8D$   
Axis 0 to 180 °  
PD 50 \_ 86 mm

### Working Distance

40mm

### Unit Increments

Power 0.12D, 0.25D  
Axis 1 °

### Measurement Time

0.3 seconds

### Minimum Pupil Diameter

2.5mm

### Measurement Display

Acquired SPH, CYL, and AXIS Value

Built-in Thermal Printer

(Up to 20 Measurements & Optimal Values for each Eye)

Recording RS-232C Serial Port

Output RS-232C Serial Port

Patient Target Landscape

### Focusing System

Target on CRT Display

### Measurement Window

24mm x 18mm (0.95" x 0.71")

### Display

127mm (5") monochrome CRT

### Accommodation

### Relaxation Method

Auto Fogging

### Joystick Range

Forward/Back 40mm (1.6")

Left/Right 86mm (3.4")

Up/Down 30mm (1.2")

### Dimension

307mm (W) x 470mm (D) x 470mm (H)

12.0" (W) x 18.5" (D) x 18.5" (H)

### Weight

18kg (40lbs.)

### Power

Voltage AC 100 to 240V

Frequency 50/60 Hz

Power Consumption 65-100VA



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