



Intelligent Refractor RT-3100



THE ART OF EYE CARE



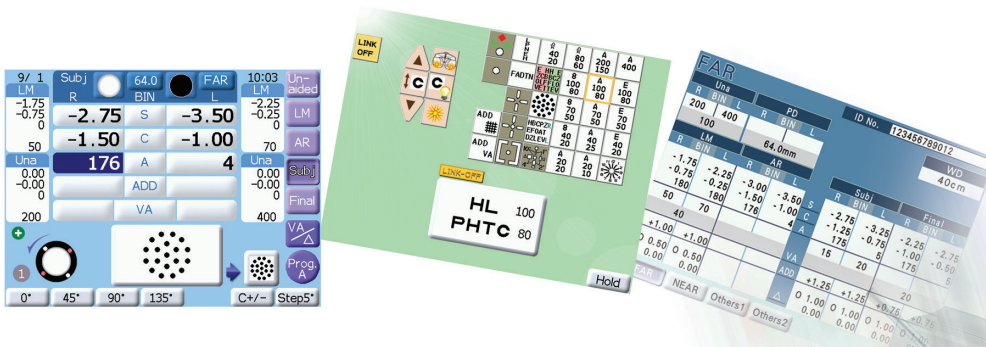
The image shows a Nidek RT-3100 Refractometer, a white, ergonomic device used for eye examinations. It features a large refractor head with two eyepieces and a control box with various buttons and a small display. The Nidek logo is visible on the side of the device.

Reliability and Technology

Sophisticated design and comfortable examination at the same time

The RT-3100 empowers you to perform refractions seamlessly and accurately by the combination of an ergonomically designed refractor head and operator-oriented control box. Simple data transfer methods provide for an extremely smooth examination process. The RT-3100, with its core examination functions, will assure the satisfaction of both you and your patients.





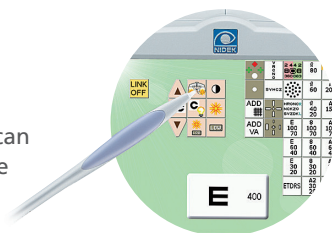
Operator-oriented Control Box

■ Intuitive color LCD touch screen

The 5.7-inch color LCD touch screen displays all data with high visibility. Simple, understandable, and comfortable user interfaces ensure an effective operation.

■ Easy on-off LED lamp

LED lamp for VA chart and near point can be easily turned on/off, by touching the icon on screen.



■ Toggle dial

The toggle dial on the control box provides smooth operation. The button on the center of dial allows the operator to quickly change sphere, cylinder, and axis powers using only one hand.



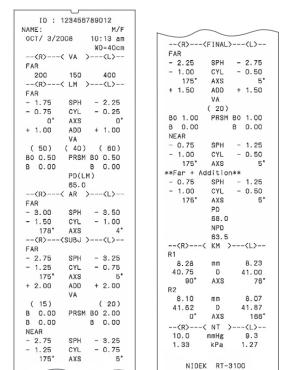
■ Cross cylinder test

Cross cylinder test is effective for determining the astigmatism correction. Axis adjustment is accomplished with the touch of a button. Spherical power is adjusted automatically to maintain spherical equivalent.



Built-in High-speed Line Printer

The RT-3100's control box includes a built-in, high-speed printer. It automatically prints out the measured results, and the data is simply laid out so that operator can easily explain to patients. Replacing the paper is effortless and takes only a few seconds.



Printout examples

Easy Software Upgrades

Quick and easy future upgrades can be performed with CompactFlash.

Ergonomically Designed Refractor Head

■ Comfortable examination

The RT-3100 has a sophisticated, ergonomic design. Furthermore, visual field of 40 degrees provides a spacially open and comfortable examination for patients.

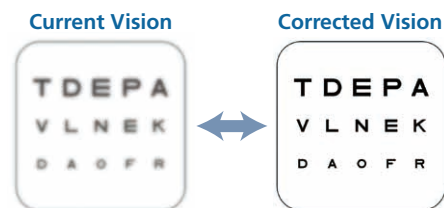
■ Smooth, quick, silent lens selection

The control box makes it smoother, quicker, and more accurate to refine sphere, cylinder, axis, and prism lenses compared to examinations with the manual refractor.

With the press of a button, internal lenses can be changed quickly, so that the patient can actually see and compare their vision with the new correction to either unaided or their current glasses prescription*.

*It requires data transfer from a NIDEK auto lensmeter or manual entry.

Please contact us for further information.



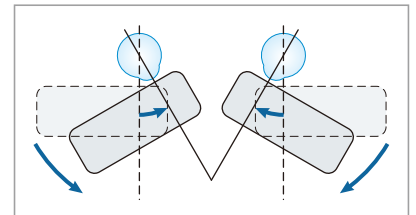
Patient's vision can be compared instantly.

■ Automatic convergence

By entering near mode, the refractor head converges automatically, and PD is adjusted.

■ R/L independent PD adjustment for improved precision

Right and left PD can be adjusted independently for more accurate and reliable measurements.



■ Clear white LED illumination

Bright and energy efficient white LED illuminates the near chart for near vision test.



■ Easy maintenance

Effortless maintenance is made possible by antifogging protective glasses, and detachable forehead rest / face shields.

■ High quality near point card

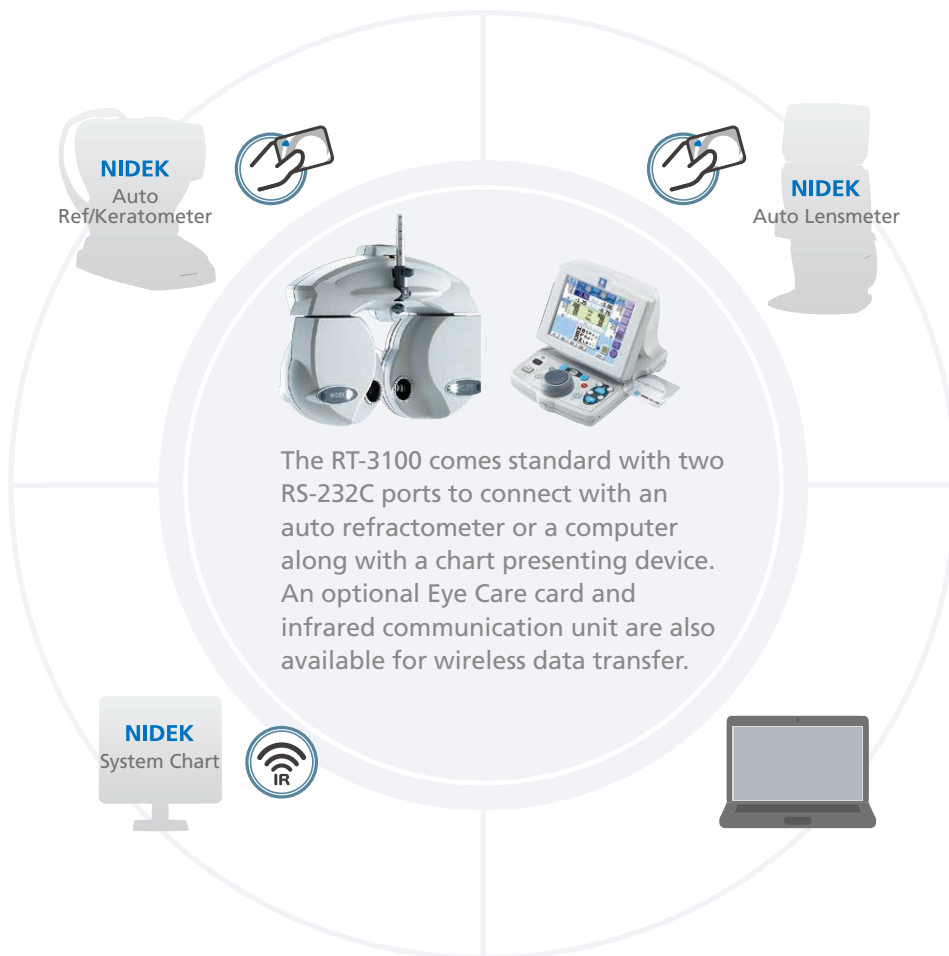
Easy-to-clean, plastic near point card is attached to the RT-3100's main body.



Working distance: 40 cm (16 inch)

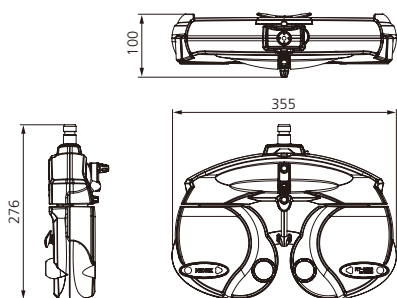


Quick and Easy Data Transfer

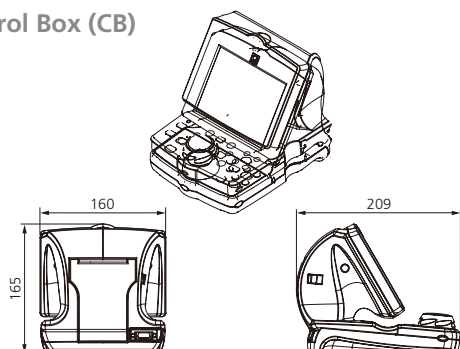


Dimensions (mm)

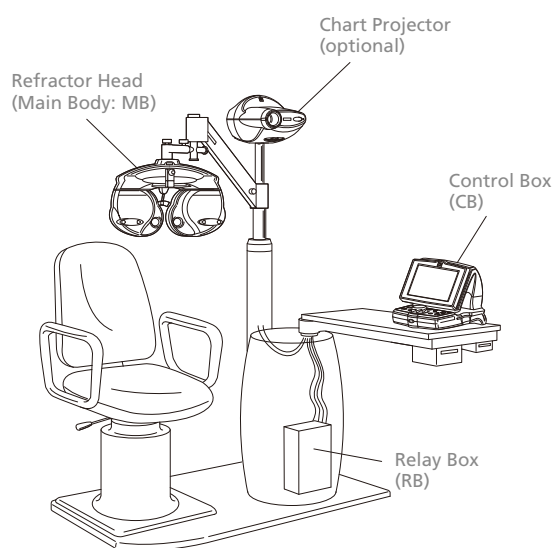
Refractor Head (Main Body: MB)



Control Box (CB)



System Configuration



*This configuration is just an example. Please contact us for further information.

RT-3100 Specifications

| | |
|-------------------------------------|---|
| Measurement range | |
| Sphere | -19.00 to +16.75 D (0.25/0.50 to 3.00 D increments) |
| Cylinder | 0.00 to ± 6.00 D (0.25/1.00 D increments) |
| Axis | 0 to 180° (1°/5° increments) |
| PD | 48 to 80 mm (far mode) 50 to 74 mm (near working distance of 35 cm) 54 to 80 mm (far PD possible for 100% convergence) |
| Prism | 0.00 to 20.00 Δ (0.10/0.50/2.00 Δ increments) |
| Auxiliary lens | |
| Cross cylinder lens | ± 0.25 D |
| Occluder | Available |
| Pinhole plate | $\phi 2.0$ mm |
| Red/green filter | Right eye: red, Left eye: green |
| PD check lens | Available |
| Polarizing filters | Right eye: 135° / Left eye: 45°, Right eye: 45° / Left eye: 135° |
| Fixed cross cylinder lens | ± 0.50 D (fixed with the Axis set at 90°) |
| Spherical lenses for retinoscope | +1.5/+2.0 D (selectable by setting) |
| Red maddox rod | Right eye: horizontal, Left eye: vertical |
| Dissociation prism | Right eye: 6 Δ BU / Left eye: 10 Δ BI, Right eye: 3 Δ BD / Left eye: 3 Δ BU |
| Visual field | 40° (VD = 12 mm), 39° (VD = 13.75 mm) |
| Refraction distance for near vision | 350 to 700 mm (50 mm increments) |
| Forehead rest adjustment | 14 \pm 2 mm |
| Vertex distance marking | 12, 13.75, 16, 18, 20 mm |
| Level adjustment | $\pm 2.5^\circ$ |
| Display | 5.7-inch color LCD |
| Printer | High speed line printer |
| Interface | RS-232C: 2 ports 1 port for connection with a chart presenting device 1 port for connection with an auto refractometer or a computer |
| Power supply | 100 to 240 V AC, 50/60 Hz |
| Power consumption | 80 VA |
| Dimensions/mass | |
| Refractor head | 355 (W) x 100 (D) x 276 (H) mm / 3.5 kg 14.0 (W) x 3.9 (D) x 10.9 (H)" / 7.7 lbs. |
| Control box | 160 (W) x 209 (D) x 165 (H) mm / 1.7 kg 6.3 (W) x 8.2 (D) x 6.5 (H)" / 3.7 lbs. |
| Relay box | 194 (W) x 227 (D) x 61 (H) mm / 2.0 kg 7.6 (W) x 8.9 (D) x 2.4 (H)" / 4.4 lbs. |
| Standard accessories | Near point card, Near point rod, Forehead rest, Face shield, Stylus pen, Dust cover, Communication cable, Printer paper, Power cord, Hexagonal wrench |
| Optional accessories | Eye Care card, Memory Box, Polarization switching unit, Refractor head tilt unit, Space Saving Chart SSC-100 |

Product/model name: REFRACTOR RT-3100

Brochure and listed features of the device are intended for non-US practitioners.

Specifications may vary depending on circumstances in each country.

Specifications and design are subject to change without notice.

All LCD images are simulated.

CompactFlash is a registered trademark of SanDisk Corporation.

