



Smart Refractor RT-5100



11/13 Sub R 67.0 15.0

LM	R	EN	15.0	15.0
-3.00	-2.25	S	-3.00	3.50
-1.00	-1.25	C	-0.75	30
30	175	A	5	30
	+2.25	ADD	+2.25	
AR	VA	25		
-3.00	20	15	25	
-1.50	B	2.00	2.00	
170	B	0.50	0.50	

FKO
NDA

Turn the dial to the sharper letters on the Red/Green.
Red ≤ Green → ⊕
0° 45° 90° 135°

The Art of Eye Care

Smart Refractor RT-5100

Patient-Friendly

- **Smart, Ergonomic Design for Patient Comfort**

- **Wide Visual Field (40°)**

- **R/L-Independent PD Adjustment for Improved Precision**

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

- **Smooth, Quiet Lens Selection for Faster Examination**

- **Built-in Clear and Safe Illumination (White LED)**

World's First --- Bright, heat-free and energy efficient white LED for near chart illumination provides a clear and safe examination environment.



Easy Maintenance & Upgrades

- **Easy-to-Clean : Detachable Forehead Rest, Face Shields, and Protective Glasses with Dirt-Resistant Coating**

Easy-to-clean parts provide easy maintenance.

- **Quick & Easy Future Upgrades with CompactFlash* Card**

*CompactFlash is a trademark of SanDisk Corporation.



User-Friendly

■ Unique Operator "Assist" Function for Easier Operation

■ Forehead Position Detector (Blue LED) for Reliable Measurement

■ Advanced Dial with S/C/A Mode Keys

The dial on the control panel provides operation with great ease. S/C/A mode keys on top of the dial allow the operator to quickly change sphere, cylinder and axis powers with one hand, offering smart and reliable examination.

■ Large Color TFT LCD Touch Panel

■ *Final Fit* Function for the Best Prescription

The RT-5100 incorporates the Final Fit (adjusted power calculation program) to help find the best and the most comfortable prescription for each patient.

■ World's First - Flip Display

■ High Speed Line Printer



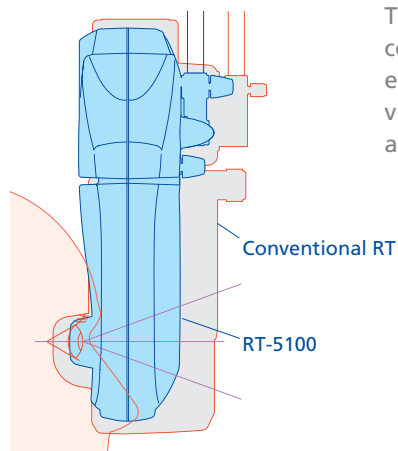
Eye Care Card System*

The RT-5100 control box incorporates the card slot for Eye Care Card System, which provides quick and easy wireless data transfer from auto refractometers and lensmeters.

*The card is optional.

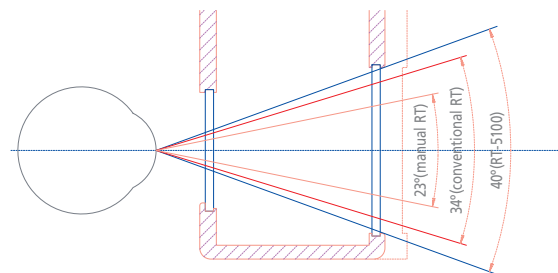
Smart Refractor RT-5100

■ Ergonomic Design & Wide Visual Field (40°)



Width comparison

The RT-5100's compact and ergonomic design does not cover the patient's entire face, offering comfortable examination. Wide visual field of 40° also provides a natural view environment for the patient, enabling more realistic and accurate measurements.

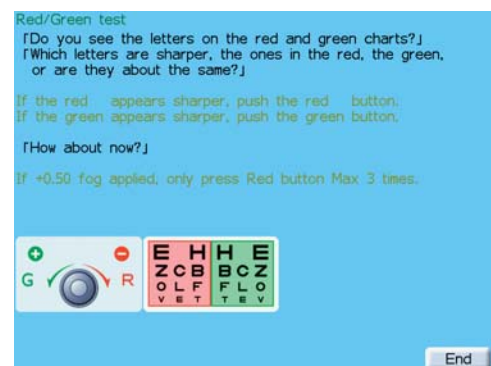


Visual field comparison

■ Operator "Assist" Function (Operation & Question Guidance)

The RT-5100's unique "Assist" function offers operation & question guidance to help operators with examination proceedings. With the RT-5100, anyone can provide smooth optometry examinations. Extended help and question guide displays also provide better operability.

The question guide display is programmable, and shown in different colors for better readability.



Question guide display

■ Smart Forehead Position Detector (Blue LED) for Reliable Measurement

The RT-5100 incorporates a forehead position detector. The clear and easy-to-recognize blue LED on the main body goes out when the patient's forehead is set in the right position for measurement, allowing operators to proceed under the optimum conditions.



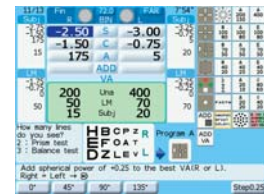
When in the right position,
the blue LED goes OUT.



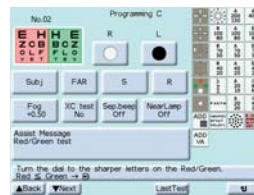
■ 8.4-inch Color LCD Touch Panel

Enhanced informative color LCD touch panel can display a great deal of information including near vision charts and program / operation messages. With the help of the operation guide, anyone can easily, smoothly and accurately select the appropriate chart using chart marks on the touch panel.

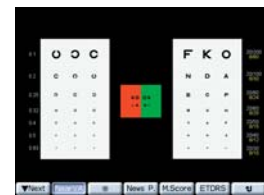
The RT-5100 offers an enhanced number of programmable optometry items, and shows the list of contents for easy programming.



Measurement screen



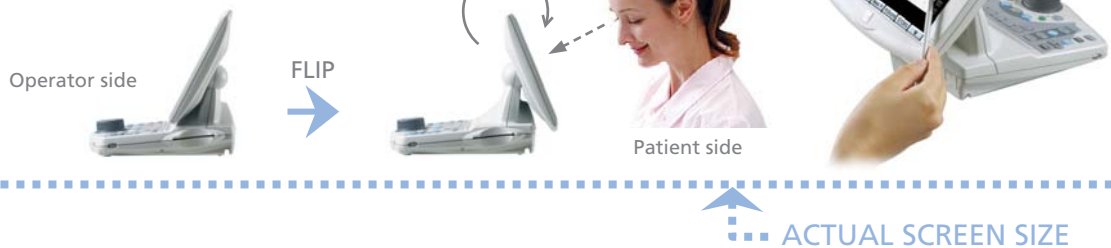
Optometry programming



Near vision chart

■ Convenient Tiltable / Flip Display

The RT-5100's tiltable LCD offers easy operation in both sitting and standing positions. Also, the operator can turn over the screen to the patient's side and use the display as a simple near vision chart for visibility check. When the screen is reversed, the displayed contents will automatically be switched upside down.



■ Clear Vision Range Check

"Clear Vision Range Check" presents the clear vision range under correction in a graphical form based on measured values.

Complicated explanations to patients are now incorporated as visual aids to make explanations and conversations easy to understand. Both patients and operators can easily communicate and be satisfied with the results.



Ophthalmic Workstation COS-5100

■ Ophthalmic Workstation

Highly advanced and space saving NIDEK COS-5100 - the ophthalmic workstation incorporating a refractor, auto ref/keratometer, slit lamp, space saving chart, lensmeter, etc. - is also available. Various system configurations are available to fit each customer's needs.



Vertical movement of the motorized main table can be controlled with the limit switch (downward movement of the table stops when the table touches the patient) for higher patient safety.

System configuration :

- RT-5100 Smart Refractor
- TONOREF II Auto Ref/Kerato/Tonometer
- LM-1200 Lensmeter
- SSC-350CG Space Saving Chart
- ST-5100 (Motorized Main Table & Side Table)

Above configuration is just an example. Please contact NIDEK for further information.

■ RT-5100S

RT-5100 with stand is also available. Compact stand for control box incorporates a printer that provides easy loading.

Stand

System Configurations

	RT-5100S / U		COS-5100	
	Item	Product code #	Item	Product code #
MAIN BODY CONTROL BOX	RT-5100S (including stand)	• 120V : 34085-0S20 • 230V : 34085-0S30	RT-5100	• 120V : 34085-0A20 • 230V : 34085-0A30
	RT-5100U	• 120V : 34085-0U20 • 230V : 34085-0U30		
TABLE / STAND	Stand (RT-5100S) (including printer & relay box)	Included in RT-5100S	ST-5100 (motorized main table & side table including printer & relay box)	• 120V : 36301-0R20 • 220/230V : 36301-0R40
Connectable Equipment				
AR/ARK	<ul style="list-style-type: none"> • AR-600/600A/610/630A/660A/800/820/860 (Tray 1) • ARK-700/700A/710A/730A/760A/900 (Tray 1) • AR-360A/330A/310A, ARK-560A/530A/510A, RKT-7700, TONOREF II (Tray 2) • ARK-9000/10000(OPD) (Tray 3) 			Product code #
SL	SL-1800 (Tray 4)			
LM	LM-500/770/820/820A/970/990A/1000(P)/1200			
CHART	CP-670/690/690ADVANCED/770, SSC-300/330/350/350CG, SC-1700 Pola/2000			

Optional Accessories

	RT-5100S/U	COS-5100	Product code #
TRAY	/		<ul style="list-style-type: none"> • Tray 1 (for AR/ARK) OT18TR-1 36330-0A00 • Tray 2 (for AR/ARK,RKT) OT18TR-2 36330-0B00 • Tray 3 (for OPD) OT18TR-4 36330-0D00 • Tray 4 (for SL) OT18TR-3 36330-0C00
MEMORY BOX	MEM-100 : 1 Auto Refractometer is capable of communication with 7 other RT (6 when a Lensmeter is connected).		34080-06B0 (200V) 34080-06C0 (100V)
IC CARD UNIT	RW unit for AR/LM : EyeCa-RW2 (Excluding AR with built-in IC card slot) IC Card : Eye Care Card (5pcs/set)		34085-06A2 (200V) 34085-06A1 (100V) 34056-1000
CHART PROJECTOR OPTIONS	<ul style="list-style-type: none"> • Floor stand : CP3B-4 • Screen stand : CP3OP-3 • Screen angle fixing set : CP3OP-2 for UK • Screen angle fixing set : CP6OP-2 for others • Screen angle fixing unit for UK • Screen angle fixing unit for others • Table stand • Red/Green glasses • Wall bracket • Reflection mirror : LC2OP-8 		33384-0620 (200V) 33384-0600 (100V) 33413 33412 33152 34801-5200 34801-5300 34801-5000 34801-6000 34801-5100 33488
SPACE SAVING CHART OPTIONS	<ul style="list-style-type: none"> • Remote control for SSC-330 : SSC3RC-1 • Remote control for SSC-350 : SSC3RC-2 • Remote control for SSC-350CG : SSC3RC-3 • Stand : SSC3ST-1 • Red/Green glasses : CP3SP-3 		33328-0040 (Type UK) 33328-0060 (Type T) 33328-0080 (Type U) 33329-0060 (Type T) 33329-0M80 (Type M) 33330-0060 (Type T) 33330-0M80 (Type M) 33333-0000 33393
SC (LCD CHART) OPTIONS	<ul style="list-style-type: none"> • Remote control for SC-1700 Pola/SC-2000 • Infrared communication unit • Floor stand • Table stand • Polarized glasses • Prism glasses • Red/Green glasses • Reflection mirror : LC2OP-8 		34605-6300 (Type UK) 34605-6400 (Type P) 34605-6500 (Type T) 34605-6600 (Type M) 34605-6700 (Type PhM) 34605-6800 (Type G)* 34085-2950 34603-2300 34603-2500 34801-6100* 34603-8250 34801-6000 33488
INTERFACE CABLES	<ul style="list-style-type: none"> • Cable 1 <5M> : OPIF-6 ⑧RT-5100 ↓ ⑧AR-600/600A/610/630A/660A/860/820/800, ARK-730A/710A/700A/700/900/9000/10000, LM-1200/1000(P)/990A/820A/820/770/500, RKT-7700, Memory box MEM-100 • Cable 2 <5M> : OPIF-14 ⑧RT-5100 ↓ ⑧AR-360A/330A/310A, ARK-560A/530A/510A, TONOREF II • Cable 3 <5M> : CP3OP-1 ⑦RT-5100 ↓ ⑦CP-670/690/690ADVANCED/770, SSC-330/350/350CG • Cable 4 <5M> : SSC20P-2 ⑦RT-5100 ↓ ⑦SSC-300 • Cable 5 <10M> for SC ⑦RT-5100 ↓ ⑦SC-1700 Pola/SC-2000 • Cable 6 <15M> for SC ⑦RT-5100 ↓ ⑦SC-1700 Pola/SC-2000 		35699-EA01 35374-EA01 is also available. 35374-EA01 33411 33315-EA01 34603-EA51 34603-EA52
OTHER	Chair : CH-100B, CH-500G		35777-00A0

(*only for the SC-1700 Pola)

RT-5100 Specifications

Measurable range	
Sphere	-29.00 to +26.75 D (0.12 / 0.25 / 0.50 to 3.00 D increments) -19.00 to +16.75 D (cross cylinder test, prism test)
Cylinder	0.00 to ±8.75 D (0.25 / 1.00 / 2.00 / 3.00 D increments)
Axis	0 to 180° (1 / 5 / 15° 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)
Rotary prism	0 to 20Δ (0.1 / 0.5 / 2Δ increments)
Auxiliary lenses	
Cross cylinder lens	±0.25, ±0.50, ±0.25 D Auto-cross
Occluder	
Pinhole plate	ø2 mm
Red maddox rod	Right eye: horizontal, Left eye: vertical
Red / Green filter	Right eye: red, Left eye: green
PD check lens	
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 D / +2.0 D
Dispersion prism	Right eye: 6ΔBU / Left eye: 10ΔBI, Right eye: 3ΔBD / Left eye: 3ΔBU
Refraction distance for near vision	350 to 700 mm (50 mm increments)
Visual field	40° (VD = 12 mm), 39° (VD = 13.75 mm)
Forehead rest adjustment	14 ±2 mm
VD scale	12, 14 (partially 13.75), 16, 18, 20 mm
Horizontal level adjustment	±2.5°
Display	8.4-inch color LCD
Printer	High speed line printer
Interface	RS-232C
Power supply	AC 100 / 120 / 230 V, 50 / 60 Hz
Power consumption	120 VA
Dimensions / Weight	
Refractor head	405 (W) x 102 (D) x 276 / 325 with bracket (H) mm / 3.5 kg 15.9 (W) x 4.0 (D) x 10.9 / 12.8 with bracket (H) " / 7.7 lbs.
Control box	220 (W) x 206 (D) x 200 (H) mm / 1.9 kg 8.7 (W) x 8.1 (D) x 7.9 (H) " / 4.2 lbs.
Relay box	194 (W) x 227 (D) x 72 (H) mm / 2.2 kg 7.6 (W) x 8.9 (D) x 2.8 (H) " / 4.9 lbs.
Printer	102 (W) x 86 (D) x 121 (H) mm / 0.3 kg 4.0 (W) x 3.4 (D) x 4.8 (H) " / 0.7 lbs.
Standard accessories	Near point card, Near point rod, Forehead rest, Face shield, Stylus pen, Dust cover, Communication cable, Printer paper, Power cord, Ferrite core (only unit and stand types)

COS-5100 Table (ST-5100) Specifications

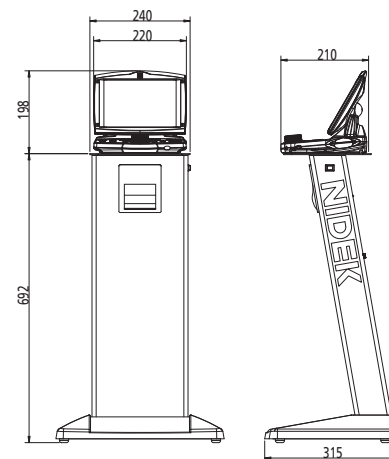
RT Arm	Electromagnetic lock
Up-and-down of RT arm	Stroke 310 mm
Back-and-forth of RT arm	Stroke to patient side 230 mm
Power supply	AC 100 to 230 V ±10%, 50 / 60 Hz
Power consumption	600 VA (max, including RT and other optometry equipment)
Dimensions / Weight	
Motorized main table	Table top: 1025 (W) x 500 (D) x 680 to 860 (H) mm (stroke 180 mm) 40.4 (W) x 19.7 (D) x 26.8 to 33.9 (H) " (stroke 7.1 ")
Fixed side table	Table top: 1080 (W) x 723 (D) x 760 (H) mm 42.5 (W) x 28.5 (D) x 29.9 (H) "
Overall	1080 (W) x 1542 (D) x 1360 to 1850 (H) mm / 160 kg 42.5 (W) x 60.7 (D) x 61.2 to 72.8 (H) " / 352.7 lbs.

All LCD images are simulated.

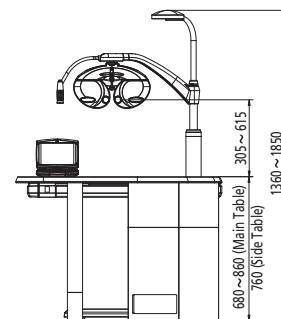
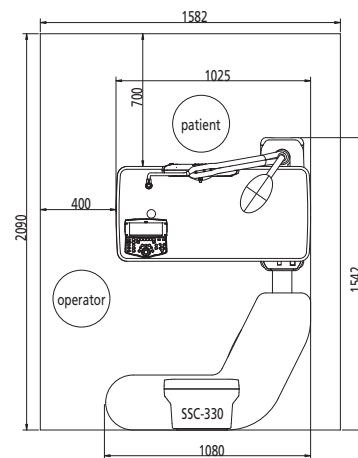
Specifications and design are subject to change without notice.

Dimensions (mm)

RT-5100S



COS-5100



HEAD OFFICE
34-14 Maehama, Hiroishi
Gamagori, Aichi, 443-0038, Japan
Telephone : +81-533-67-6611
Facsimile : +81-533-67-6610
URL : <http://www.nidek.co.jp>
[Manufacturer]

TOKYO OFFICE
(International Div.)
3F Sumitomo Fudosan Hongo Bldg.,
3-22-5 Hongo, Bunkyo-ku, Tokyo,
113-0033, Japan
Telephone : +81-3-5844-2641
Facsimile : +81-3-5844-2642
URL : <http://www.nidek.com>

NIDEK INC.
47651 Westinghouse Drive
Fremont, CA 94539, U.S.A.
Telephone : +1-510-226-5700
: +1-800-223-9044 (US only)
Facsimile : +1-510-226-5750
URL : <http://usa.nidek.com>

NIDEK S.A.
Europarc
13, rue Auguste Perret
94042 Créteil, France
Telephone : +33-1-49 80 97 97
Facsimile : +33-1-49 80 32 08
URL : <http://www.nidek.fr>

NIDEK TECHNOLOGIES Srl
Via dell'Artigianato, 6 / A
35020 Albignasego (Padova), Italy
Telephone : +39 049 8629200 / 8626399
Facsimile : +39 049 8626824
URL : <http://www.nidektechnologies.it>

