LED Light measurement system

▶LED Traffic Signal Lamp Measurement system / NeoLight 1000

- Fully automatic H,V scanning system
- Robust and highly stable optical system
- High sensitivity light sensor and high precision control system
- Remote control system using high speed communication
- Built-in adjustment laser
- Print various results
- Exchangeable lamp mount stage
- Scanning resolution: +/- 0.1 deg. (Max. +/- 0.01 deg.)
- Color Measurement system
- MS Windows based software
- Application: LED signal lamp

▶General Luminaire Measurement System / NeoLight 2000

- Measurement according to CIE 121 specifications
- Fully automatic X Y lamp light measurement system
- Highly sensitive radiometer / photometer (PRM-305)
- Robust and highly stable optical system
- Various samples set up
- Built-in adjustment laser
- Easy MS Windows based application software
- Print various results
- Exchangeable lamp mount stage
- Scanning resolution: +/- 0.01 deg.
- Application: LED lamp, general light source, fluorescent light, CCFL, facial light source

▶Automative Lighting Measurement System / NeoLight 3000

- Measurement according to CIE 121 specifications
- Fully automatic H V lamp light measurement system
- Highly sensitive radiometer / photometer (PRM-305)
- Robust and highly stable optical system
- High sensitivity light sensor and high precision control system
- Fast measurement (500 points/sec)
- Remote control system using high speed communication
- Various samples set up
- Built-in adjustment laser
- Easy MS Windows based application software
- Print various results
- Exchangeable lamp mount
- Scanning resolution: +/- 0.01 deg.
- Application: navigation lights for aircrafts and ships, automotive lamp, flood light

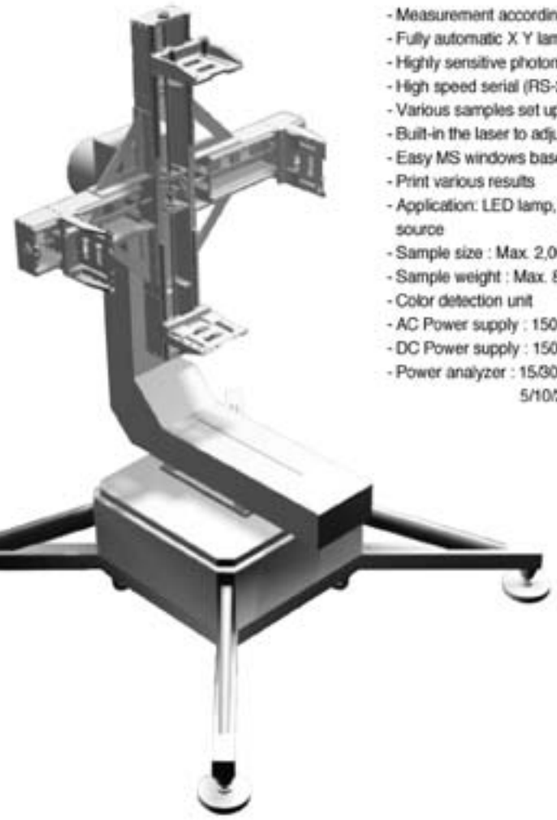
▶VMS Performance Test System / NeoLight 5000

- Measurement according to CIE 121 specifications
- Robust and highly stable system
- Adjustable of lamp position
- Excellent sensitivity of radiometer/photometer
- Measurement of luminance and color coordinate
- Zero point alignment of X-axis and Y-axis (automatically)
- Application: VMS. LED modules
- Scanning resolution: +/-0 01 deg
- Easy MS Windows based application software

▶Absolute Luminous Flux Measurement System / NeoLight 7000

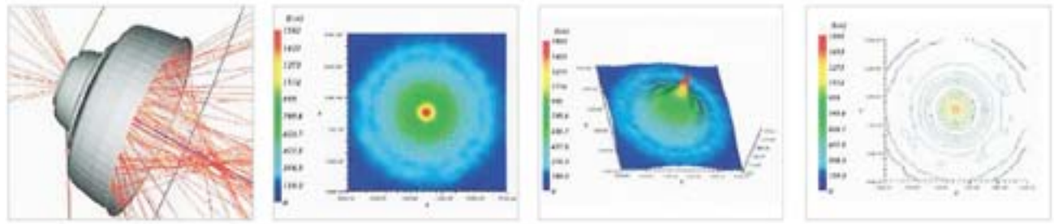
- Measurement according to CIE 84 specifications
- Absolute luminous flux measurement system
- Precision alignment
- Robust and highly stable optical system
- Application: LED, lighting lamp, small lamp, light bulb type light source

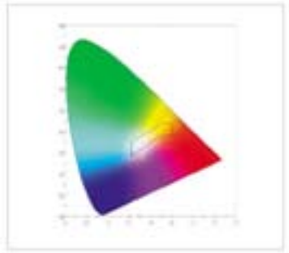
▶Heavy LED Lamps Measurement System / NeoLight 8000

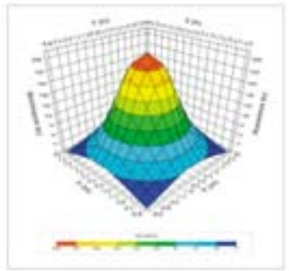


- Measurement according to CIE 121 specifications
- Fully automatic X Y lamp light measurement system
- Highly sensitive photometer and highly precision control system
- High speed serial (RS-232/RS-485) communication with PC for remote control
- Various samples set up
- Built-in the laser to adjust zero point of lamp
- Easy MS windows based application software
- Print various results
- Application: LED lamp, general light source, fluorescent light, CCFL, facial light source
- Sample size : Max. 2,000mm
- Sample weight : Max. 80Kg
- Color detection unit
- AC Power supply : 150V/300V, 16.8A/8.4A, 2KW
- DC Power supply : 150V, 10A, 1,500W
- Power analyzer : 15/30/60/150/300/600 V 5/10/20/50/100/200 mA

Lighting System







▶C-type Huge Goniophotometer / NeoLight 8800

- 2 axes rotating and linear moving type goniometer
- Rotating angle resolution : ± 0.001 deg.
- Angle accuracy : 0.01 deg.
- Sample size : Max. Length 2,500 mm
- Sample weight : Max. 100 Kg
- System uncertainty : > 1.7 % (for STD lamp luminous intensity)
- DUT axis rotating angle range : ± 180 deg.
- Mode : Auto Scanning Mode
- Motor status display (Power on/off, Axis, Move status)
- Color detection unit
- AC Power supply : 150V/300V, 16.8A/8.4A, 2KW
- DC Power supply : 150V, 10A, 1,500W
- Power analyzer : 15/30/60/150/300/600 V
  5/10/20/50/100/200 mA

▶Mirror type Goniophotometer / NeoLight 9700

- Scanning resolution : 0.01 deg.
- Accuracy : 0.03 deg.
- Exchangeable lamp mount unit
- X, Y-axis scanning : ± 180 deg.
- Sample weight : Max. 50 Kg
- Sample size : Max. 1,200 mm
- Motor balance mirror system
- Mirror size : 1,500mm x 2,200mm
- Mode : Auto Scanning Mode
- Motor status display (Power on/off, Axis, Move status)
- Color detection unit
- AC Power supply : 150V/300V, 16.8A/8.4A, 2KW
- DC Power supply : 150V, 10A, 1,500W
- Power analyzer : 15/30/60/150/300/600 V
  5/10/20/50/100/200 mA

FPD Optical Measurement system

▶Automatic FPD Measurement System / NeoLight 4000

- Measurement according to VESA FPDM 2.0 specifications
- Measurement of luminance and color coordinate by 4-axes servomotor and encoder
- Built-in various functions to apply to design and test of LCD, ELD, PDP, LED, etc.
- Process data about luminance, color coordinate, uniformity, C/R
- Easy MS Windows based application software
- Application: LCD, PDP, BLU, OLED

▶Super High Speed 3D Display Measurement System / NeoLight 4000VT

- Measurement according to VESA FPDM 2.0 specifications
- Measurement of contrast ratio of displays
- Measurement of luminance and viewing angle
- Measurement of color coordinates according to viewing angle

▶Robot FPD Measurement System / NeoLight 9000

- Measurement according to VESA FPDM 2.0 specifications
- Measurement of luminance and viewing angle change of FPD
- Measurement and test light characteristics of large FPD (80 inch)
- Humanistic measurement using movable robot luminance instrument
- Application: LCD, PDP, OLED, BLU

▶Anisotropic Scattering Light Measurement System / BSDF 3000

- Measurement according to VESA FPDM 2.0 specifications
- Bidirectional Scattering Distribution Function (measure reflection, transmittance and scatteration)
- Precise safety control system
- Easy alignment of optical axis
- Measurement of various samples
- Application: reflective films, floodlight films, building materials

LED Light measurement integrating sphere system

▶LED module total luminous flux integrating system (500mm) / NeoLight IS250

- Integrating sphere for LED unit measurement
- Sphere diameter: 250mm
- Port: Standard, Temperature, Detector ports
- Laser alignment
- Reflection material: $BaSO_4$
- Reflection efficiency: ≥96%
- Dynamic range: 9 decade (1mA~1pA)
- Detector response time: 10~250 nsec
- f1′ factor accuracy: < 1.5%
- Computer programmable
- DC Power Accuracy: V 0.05%, A 0.1%
- Power Analyzer Voltage range: 15/30/60/150/300/600 V
  Current range: 5/10/20/50/100/200 mA
  Accuracy: ±0.2% (Voltage/Current)
- MS Windows based operating system
- Total luminous flux value, Color coordination (x, y), CCT(K), CRI(Ra), Spectrum
- Computer system: CPU Quad Core / 4GB / 1TB / 28"LCD / Color laser printer
- Standard Lamp and Auxiliary lamp certificate

▶LED module total luminous flux integrating system (500mm) / NeoLight IS500

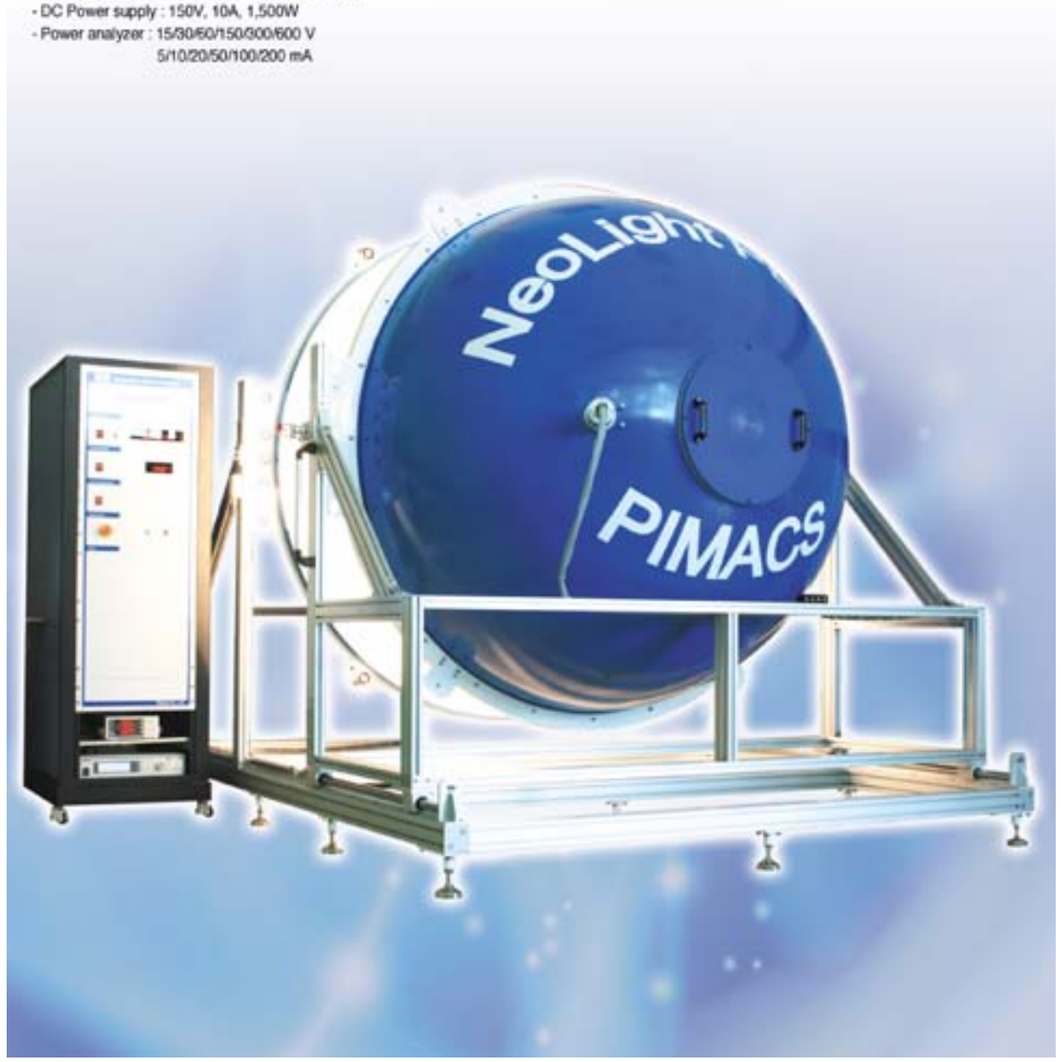
- Integrating sphere for LED unit measurement
- Sphere diameter: 500mm
- Port: Standard, Temperature, Detector port
- Laser alignment
- Reflection material: $BaSO_4$
- Reflection efficiency: ≥96%
- Dynamic range: 9 decade (1mA~1pA)
- Detector response time: 10~250 nsec
- f1′ factor accuracy: < 1.5%
- Computer programmable
- DC Power Accuracy: V 0.05%, A 0.1%
- Power Analyzer voltage range: 15/30/60/150/300/600 V
  Current range: 5/10/20/50/100/200 mA
  Accuracy: ±0.2% (Voltage/Current)
- MS Windows based operating system
- Total luminous flux value, Color coordination (x, y), CCT(K), CRI(Ra), Spectrum
- Computer system: CPU Quad Core / 4GB / 1TB / 28"LCD / Color laser printer
- Standard Lamp and Auxiliary lamp certificate

▶Absolute Integrating Sphere Method system / NeoLight PL7000

- Integrating sphere size: 2,000mm
- Port: Standard, Temperature, Detector, Laser ports
- Laser alignment
- Reflection material $BaSO_4$
- Reflection efficiency: ≥96%
- Dynamic range: 9 decade (1 mA ~ 1pA)
- Response time: 10~250 nsec
- f1′ factor accuracy: < 1.5%
- MS windows based operating software
- Absolute total luminous flux value, color chromaticity, CCT, CRI parameters
- Computer system: CPU Quad Core / 4GB / 1TB / super multi / 23"LCD / Color laser printer
- DC Output: 1,500w, 150V, 10A
- Calibration from KRISS

▶LED Light Integrating Sphere System / NeoLight PL5000-1m, 1.5m, 2m

- Measurement of relative luminous flux according to CIE 84 specifications
- Luminous flux measurement of light sources
- Measurement of chromaticity coordinates, color temperature, color rendering indexes
- High quality integrating sphere (up to 2,000 mm sphere diameter)
- Spectral analysis of test samples
- Highly sensitive photometric measurement system
- Multi function-main control computer system
- Technology developed by KRISS
- Application: LED, fluorescent lamp, light-bulb type light source, LED module
- Color detection unit
- AC Power supply : 150V/300V, 16.8A/8.4A, 2KW
- DC Power supply : 150V, 10A, 1,500W
- Power analyzer : 15/30/60/150/300/600 V
  5/10/20/50/100/200 mA



Retroreflectometer system

▶Road Sign Retroreflectometer / NeoLight PR1000

- Measures retroreflectivity of road signs according to ASTM E1709 specifications
- Portable retroreflectometer for measuring the retroreflectivity of various materials
- Measures the reflection of light of -4° of incidence at 0.2° measurement angle
- Microprocessor controlled self-calibration and auto-zero
- High precision and robust optical measurement system
- Data storage capacity of 10,000 measurements
- Built-in rechargeable battery with low battery alarm
- High luminance LCD display
- High speed serial communication with PC (RS-232)
- Rugged aluminum case
- MS Windows based software for operation and data communication

▶Delinator Retroreflectometer / NeoLight PR1200S

- Optical configuration: Traffic signal safety standard
- Entrance angle: 0°
- Observation angle: 0.2°
- Light source: CIE standard lamp type A
- Photopic corrected detector
- Measurement range: 0 to 2,000 cd/lx m2
- Weight: 3.2 kg
- Case material: Aluminum
- Standard Sample: White color
- Battery: 9.6V, 1.4Ah
- Communication cable: RS-232C (2m)

▶Road Marking Retroreflectometer / NeoLight PR2000

- Measures retroreflectivity of pavement markings according to ASTM E1710
- Microprocessor controlled self-calibration and auto-zero
- Programmable range and functions with built-in keys
- High precision and robust optical measurement system
- Data storage capacity of 10,000 measurements
- Large dynamic range (0 ~ 2,000 mcd/lux.m)
- Built-in rechargeable battery with low battery alarm
- High speed serial communication with PC (RS-232)
- Rugged aluminum case
- MS Windows based software for operation and data communication
- Optional GPS unit for automatic sign location identification
- Portable printer (option)

▶Road Stud Retroreflectometer / NeoLight PR2000RM

- Measures retroreflectivity of pavement markings according to ASTM E1696-04
- Microprocessor controlled self-calibration and auto-zero
- Programmable range and functions with built-in keys
- High precision and robust optical measurement system
- Data storage capacity of 10,000 measurements
- Large dynamic range (0 ~ 2,000 mcd/lux.m)
- Built-in rechargeable battery with low battery alarm
- High luminescence LCD display
- High speed serial communication with PC (RS-232)
- Rugged aluminum case
- MS Windows based software for operation and data communication
- Optional GPS unit for automatic sign location identification

▶Retroreflection Measurement System / NeoLight PR3000

- Fully automatic 3D Retroreflection measurement System
- Three axis precision scanning goniometer
- High precision observation angle scanning system
- CIE standard illuminant (2856K)
- Robust and highly stable optical system
- Highly sensitive radiometer/photometer (PRM304)
- Reflection or lamp color measurement system (option)
- Remote control (RS-232/RS-485) by PC
- Window based Software

LED Lamp Reliability Test System

▶LED Lamp Lifetime Test System / LAS-5000 (30ch) / LAS-3000 (12ch) / LAS-2000 (6ch) / LAS-1000 (1ch)

- Max DUT size: 400mm(W)x400mm(D)x400mm(H)
- DUT ON/OFF Interval Time: 1~60 sec
- DUT ON/OFF Counting Number: 1~1,000,000
- Computer Programmable Power Supply
- AC Power Source: 300V, 13A, 1,750W
- Power Analyzer
- JIGs for LED Signal Lamp, LED Lamp and LED Module
- Computer: CPU Dual Core / 4GB / 1TB / DVD Combo / 22" LCD / Color laser printer
- Software
  Enable to control all power supplies
- Certificate

▶LED Lamp Environment Test System / LES-5000 (30ch) / LES-3000 (12ch) / LES-2000 (6ch) / LES-1000 (1ch)

- Dimensions (in): 2,500Ø(W) × 1,300Ø(D) × 1,800㎜(H)
- Test temp. range: -30℃ ~ 140℃ / 25 ~ 95% (10~95℃)
- Temp. & Humid. range: ±0.2℃ / ±0.5%
- Temp. & Humid. Uniformity: ±1℃ / ±2%
- Temp. heat up rate: -30℃ ~ 140℃ heating: 3.0 K/min
- Viewing window
- LED Lamps 3 types x 6 ea. = 18 ea.
- Linearity: ± 0.3%
- f1' factor accuracy: < 1.5 %
- Spectroradiometer
  Wavelength range: 250 ~ 850 nm
- Camera
  Resolution: 1392*1040
  Speed: 30 fps
- Automatic XY Stage
  Stroke: 1,800 × 1,800 mm
- DC Power Supply
  100V, 10A, 1Kw
- H/W and S/W connection with main program
- AC Power Source: 300V, 6A, 1Kw
- Power Analyzer
  Frequency range: DC & 0.5 Hz to 100 kHz
  Voltage Range: 15/30/60/150/300/600 V
  Current Range: 5/10/20/50/100/200 mA
  Accuracy: ±0.2 % (Voltage/current)
  Display updating intervals: 0.1/0.25/0.5/1/2/5 seconds
- Switching and DMM system
  80 channel switching main frame
  Maximum signal level: 110V DC, 1A, 30VA
  Contact life: 108 operations cold switching
  Offset current: <100pA
  13 built-in measurement functions
  2,000 readings/second at 4 1/2 digits
  Resolution: 0.1 uV, 10 nA
- AVR
  Output: 10Kw, 220V, 1phase
- PC
- Software
  MS Windows based menu driven system