

## PG-3000 C-Type Goniophotometer with rotating Mirror (Brochure)

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EMC&EMI Test System: [http://www.pegotester.com/products/EMC\\_EMI](http://www.pegotester.com/products/EMC_EMI)

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Goniophotometer test system: <http://www.pegotester.com/products/goniophotometer>

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#### Introduction:

C-type goniophotometer with rotating mirror is completely meet the requirements of CIE70 and LM-79. During the test, the lamp under test is keep burning, and keep the lamp stationary to decrease the error caused by airflow. The goniophotometer is applied to test all kinds of luminaire, like HID, LED, CFL, incandescent lamp and so on. The test parameters include luminous intensity distribution curve, effective light emitting Angle, beam angle, total luminous flux, zonal luminous flux, upward luminous flux, downward luminous flux, lamp efficiency, isolux diagram, isocandala diagram, utilization factor, lumiance limit curve, glare, max allowable distance ratio, UGR uniform glare and etc. All the data can be saved as IES, PDF, excel, LDT, CIE and TM14 files.

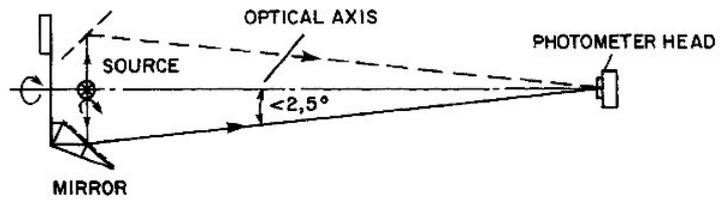
#### Configuration:

1. PG-3000 C-type goniophotometer with rotating mirror, includes:

- rotation console with Japanese branded servo motor, has features of low noise and stable.
    - 1) angle accuracy:  $0.1^{\circ}$ , resolution:  $0.002^{\circ}$
    - 2) Test speed: H,M,L (optional)
  - Balanced optical reflect mirror
  - Angle acquisition control system
    - 1) 17bit absolute encoding goniometer
    - 2) Angle range:  $-180^{\circ}\sim+180^{\circ}$  (G axis),  $0^{\circ}\sim360^{\circ}$  (C axis)
    - 3) Angle interval:  $0.01^{\circ}$ ,  $0.1^{\circ}$ ,  $0.5^{\circ}$ ,  $1^{\circ}$ ,  $5^{\circ}$ ,  $10^{\circ}$
  - Constant temperature photo-detector (photometer head)
    - 1) Scientific grade detector:  $f1 < 1.5\%$
    - 2) Innovative diaphragm structure, pre-amplified
    - 3) Temperature keep at  $30^{\circ}\text{C}$
    - 4) Equip with supporter
  - Clamps for all types of lamp
  - Double channel linear laser aligning device
  - Cabinet: equip with 17 inch LCD touch screen to display angle, luminous intensity data, temperature
  - English version software: output LCC, IES, LDT, TM4, CIE files
2. High accuracy AC power supply
3. CC&CV DC power supply
4. Digital power meter
5. Luminous intensity standard lamp
6. Computer and printer: **prepare by user**
7. Lab design diagram: **seller will provide lab design according to buyers' site.**

**Working principle:**

The light source is turned around a vertical axis and a mirror arrangement around a horizontal axis, the position of the detector is fixed. A single rotating mirror can easily align, ensure no direct light from the light source reaches the detector, and the mirror must be sufficiently large so as not to cause vignetting in the beam path.



**Specification:**

- Photometric test:  $V(\lambda)$  accuracy  $f1'$  less than 1.5%; Photometric sensitivity: 0.0001lx
- Test range of light intensity: 50mcd ~ 2.0 ×108 cd
- Stray Light: less than 0.1%
- Angle Accuracy: 0.01 degree
- Driving Angle Resolution:  $\gamma$  angle is 0.0016 degree; C angle is 0.03 degree;
- Dimension of Mirror: 1.5m×2.0m
- Height of Equipment: 5.6m; Weight: 1800kg
- Test lamp

Model	size of sample lamp (max)	Weight (max)
LG-2000B	1.6m	50KG
LG-2000	1.3m	50KG



Lab requirement:

- lab size:
  - 1) dark room for rotation console: 15m\*5m\*5m (recommend, L\*W\*H), 8m\*5m\*4m (minimum)
  - 2) Operation room: 4m\*3m\*3m (L\*W\*H)
- Dark room:
  - 1) th dark room (include wall, ceiling, floor) must be coated with dull black or black carpet.
  - 2) The dark room must keep clear and dry, ensure no direct reflected light.



- Stray light:

The baffles must be placed between mirror and detector so that direct light from the light source, also no light reflected from the floor, the ceiling or the wall can reach the detector.

- Ambient temperature:

The light source should be operated during the measurement in a draught-free room in such a way that the convection flow of the surrounding air is not impaired. Photometric measurements are usually performed at an ambient temperature of 25°C.

- Vibration and shock:

When switched on, most lamps should not be subjected to accelerations exceeding 10m/S<sup>2</sup> (4-3000Hz) or positional changes exceeding 30mm (up to 4Hz).

- Stabilization period

It is the purpose of the stabilization period to achieve a stable state of all parameters important of the measurement. Special attention should be paid to avoid changes in the burning position and the specified operating parameter. The required stabilization period depends on the type of the lightsource and the operation conditions. A light source can be considered as stabilized if the corresponding reading no longer show a trend in one direction.