PG-VTG CIE A-α Type Goniophotometer Test System for Traffic Signal Lamp (Brochure)

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1. Introduction:

PG-VTG goniophotometer is designed according to CIE A-α, it is applied to test the photometric performance and verify conformance of the traffic singal lamps, like conner lamp, fog Lamp,direction Indicator, warning lamp, turn lamp and so on. Completely meet the requirements of ECE and SAE standards. Equip with software, enable to output IES, PDF, excel files.

2. Configuration:

1) PG-VTG goniophotometer:

● Rotating console: adopts high quality motor with low noise.
  Rotation angle accuracy: 0.01^0

● Photo-detector: class L(fi<1.5%) or class A

● Photometer: low drifting, high accuracy

● English software: can output IES file, PDF file, excel file

● Double channel line type laser alignment device

● Clamps for lamp mounting

2) 104 digital power meter (AC/DC): voltage (0-600V), current(0-20A), power, power factor (-1.000~1.000), frequency (45Hz-130Hz); accuracy:±0.4%+0.1%range+1digit

3) 3010 CC&CV DC power supply: 30V/10A, sine-wave, constant current and constant voltage output. Output voltage: DC 0.005V ~ 30.00V; Output current: 0.005A ~ 10.00A, output power: 300W (max)

4) 500VAR AC power supply: 500VA, power the luminiare under test. Output frequency: 45-65Hz, 50/60Hz; Output voltage: 0.0-300.0V; Output current: ≤8.4A at 110V, ≤4.2A at 220V

5) 19 inch cabinet: put the overall control system

6) Computer and printer: prepare by user

3. Lab requirement:

1) Dark room for goniometric rotating console: 5.9m(H)*5m(W)*5m(L).

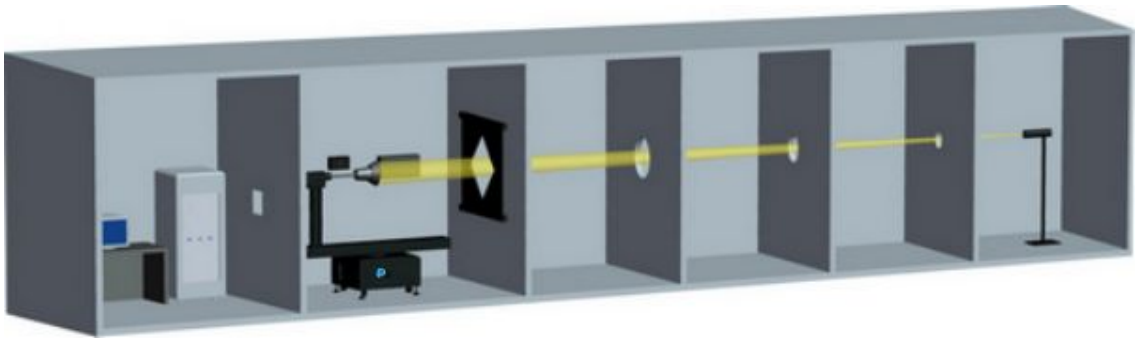
2) Dark room for photometric light path: 1.5m(H)*1.5m(W)*15m~30m(L).

3) Control room: 2.5m(H)*3m(W)*3m(L). The control cabinet, computer and printer are put in control room.

* Dark room (includes wall, ceiling and floor) should be coated with dull dark paint, or be

* The temperature of dark room should be controlled by air conditioner according to CIE requirement (25±1℃).

* Pego will provide lab design support according to actual conditions after order onfirmed.



3. Working Principle

The system adopts the most advance solution for traffic singal lamps to test photometric perfomance according to CIE A-α. During the test, photodetector shall keeps stationary, lamp under test rotates around vertical axis (A-plane) and horizonal axis (α-plane), so that to get the luminous intensity distribution of overall space.

4. Parameters:

1) Rotation Console:

- Angle accuracy: 0.01^0; resolution: 0.001^0
- Up-down move range: 265mm
- Right-left move range: 700mm
- X, Yeffective stroke: 500mm*300mm

2) Photodetector

- Accuracy: class L (f1'＜3.5%）
- luminance range: 0.01lx~$2*10^5$lx
- Equip with support
- Signal lamp test (3.162m test): 0.001~300.0lx, resolution: 0.001lx
  Headlamp test)25m test): 0.01~3000.0lx, resolution:0.01lx

5. Goniophotometer system designed according to :

ECE Regulation No.112-2008, Headlamps(With an asymmetrical Passing Beam)
ECE Regulation No.113-2007, Headlamps(With a Symmetrical Passing Beam)
3) ECE Regulation No.119-2005,Cornering Lamp
4) ECE Regulation No.19-2009,Front Fog Lamps
5) ECE Regulation No.23-2004,Reversing Lamps
6) ECE Regulation No.50-2007,Lights(Moped,Motor Cycle)
7) ECE Regulation No.6-2008,Direction Indicators
8)ECE Regulation No.7-2008,Front and rear position(side) lamps,stop lamps and end-outline marker lamps
9) SAE J131-1997, Motorcycle Turn Signal Lamps
10) SAE J222-2000, Parking Lamps (Front position lamps)
11) SAE J585-2000/SAE J586-2000/SAE J588-2000/SAE J592-2000 Tail Lamps (rear position lamps) for Use on Motor Vehicles Less Than 2032mm in Overal Width
12) SAE J593-2000,Back Lamps