



Pleiades Instruments

Photometric and Colorimetric Camera Reduced System

For Automotive Lighting qualification



Company synopsis

Pleiades Instruments is an optoelectronic system maker, designing and manufacturing for you specific systems such as photometric measurement and customized systems. Designing high performance devices, our team assists you in standard and specific need.



Our devices are used by automotive and general lighting industry for the development, the testing, the calibration and the production of different types of products such as rear or head lamps.

Goniophotometers and Multicells systems, by analyzing the spatial distribution and the photometric properties of different kind of sources, will help you for the certification of your devices, according to many different standards (SAE, ECE, Japan, ERAI, GB) on 10 or 25 meters distance.

Regulations and standards



Regulations and standards impose conditions on the spatial repartition but also on the spectral components of lamps. For instance, ECE regulation imposes new headlamps to emit a white light.

Manufacturers of automotive lighting systems need testing and qualifying tools throughout the development and manufacture of their products. To do so, they need measurements using one or several photometric sensors and mobile elements to do specific evaluations.

Our goniophotometers have been developed to make the characterization of many kinds of products, precise and easy at the same time.

Reduced Camera System for Lighting

Camera reduced system for Lighting allows measurement and qualification of headlamp products according to different standards (SAE, ECE, Japan) on short distance through a lens.

Thanks to this device, useful for Research and Development as well as for the automotive lighting industry, our customers can test and certify many different products.



Our camera system for lighting has many assets :

- ◆ Stand alone system.
- ◆ Compact
- ◆ High maximum load (25kg/55 pounds)
- ◆ Large measurement range : 0.01 to 450 lux
- ◆ High photometric resolution
- ◆ Possibility to realize colorimetric measurement
- ◆ Thanks to their design, our devices are among the most compact on the market
- ◆ Short measurement distance
- ◆ Enclosed system avoiding straight light
- ◆ Motorized rotating and vertical stages
- ◆ Different measurements modes
- ◆ High quality and repeatability of the measurements
- ◆ Instant measurement
- ◆ Instant measurement
- ◆ No photometric room required
- ◆ Easy to use software, allowing different kinds of measurements, with a large range of standards and products
- ◆ Our devices allow tests and qualifications according to many different standards: ECE, SAE, Japan... etc
- ◆ High quality maintenance with our reliable, timely, cost effective services for soft/hardware and our reactive after sales service



Optical Configuration

Camera Reduced system for Lighting optical features

Camera	2 MPixels	8 MPixels	16 MPixels
Horizontal FOV	+/- 8°	+/- 15°	+/- 21°
Vertical FOV	+/- 5°	+/- 10°	+/- 13°
Résolution	0,015°	0,015°	0,015°
Colorimetric and photometric Measurement	Yes	Yes	Yes

The reduced camera system can be configured with 3 different field of view configurations depending your requests. If you have specific requests, please contact Pleiades instruments Team for more requests.

Photometric measurement

The system can realize measurement of photometric measurement with lighting products up to 450 lux.

With ALPES-C software it's possible to realize others photometric measurements like :

- ECE, SAE, CCC regulations
- IsoCandela
- Cutoff setting and measurement
- Photometric stability
- Cutoff Stability

Thanks to the rotating stage, it's possible to realize photometric measurement with a large horizontal angle (up to +/- 60°)

Colorimetric measurement

The camera allows to realize colorimetric measurement (CIE 1931). Thanks to 2 red filters (Xa and Xb), colorimetric measurements are more accurate.

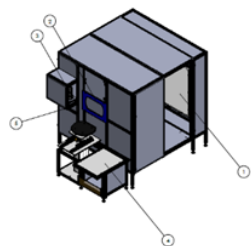
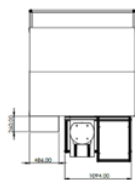
With ALPES-C software it's possible to realize others colorimetric measurements like :

- ECE, SAE, CCC colorimetric regulations
- Colorimetric scan

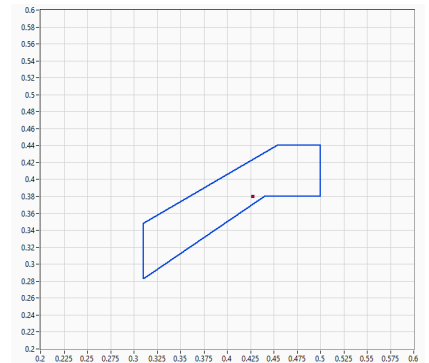
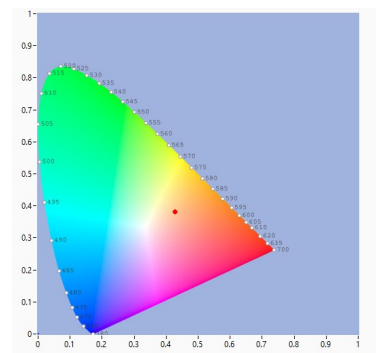


System general features

Photometric range	0,01 to 450 Lux
Photometric resolution	4 digits
Display frequency	1 Hz
Measurement Mode	Continuous
	PWM
Power Supply	2 power supplies : 18V/20A
Weight	Weight: 200 Kg
	Height: 1.90m
	Width: 1.77m
Multicells System Signaling Size	Length: 2.70m
Power requirements	230V/50Hz/16A
Computer	RAM: 15 Go
	Software: ALPES, Pack Office



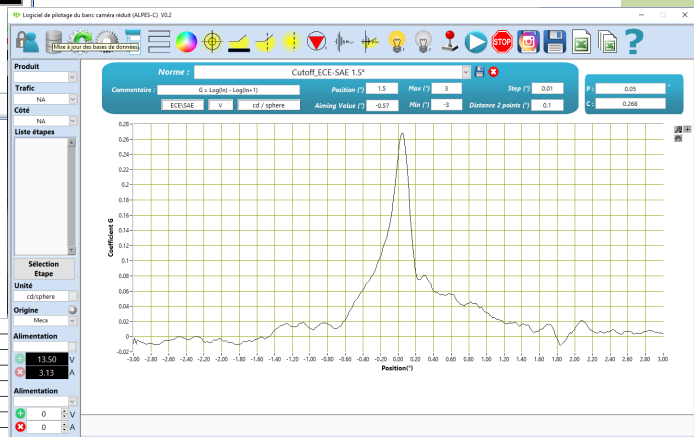
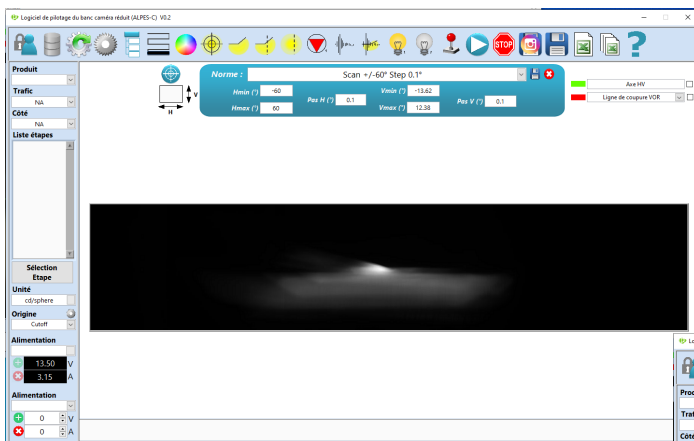
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Software : ALPES-C

Our system is delivered with our fully applicative software called ALPES-C (Automotive Lighting Photometric Equipment Software).

ALPES-C is an application used for controlling and running the photometric systems manufactured by Pleiades Instruments. It offers a user friendly and simplified user interface for operators in production mode, or a fully customizable software for administrators and Research & Development users.



Pleiades Instruments	Produit	R123-ClasseV-RHT_501	
	Réglementation		
	Fabricant		
	Opérateur		
	Unité photométrique	cd	
	Date	22/11/2021	
	Fonction	Headlamp	
CONFORM		Consigne	Mesure
		U(V)	13.5 13.50
		I (A)	4 1.75
	Commentaire :		

Nom de la mesure	HOM		CDC		Mesure		Zone
	Min	Max	Min	Max	Min	Max	
B 50L	50.00	350.0			320		
HV	50.00	625.0			571.1		
BR	50.00	880.0			430.9		
Segment BRR		880.0			115.8	417.2	
Segment BLL		880.0			92.47	326.5	
Zone IIIa		625.0			192.1	610	
50R	5100				23839		
50V	5100				5200		
50L	3500	13200			4250		
25LL	845.0				3815		
25RR	845.0				15139		
Segment10		12300			10250	11050	
E Max	8400	44100			43948		

This software allows a large type of measurements for complex analysis, production... A database of standards that can be tested is provided with the system. ALPES-C provides a report indicating if a measurement is conform to the standards. Moreover, lots of measurement types are available: point, scan, cut, succession of measurements on the same products and cutoff stability.

The administrator mode allows the user to prepare the measurements and to calibrate the cells if necessary; then, the operator has just to start the measurement and to analyze results.

ALPES-C is a very flexible software which means that it is possible for users to configure all measurements. Updates are also regularly available online.

Certification



Certificat

Certificate

N° 2017/74946.2

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AFNOR Certification certifie que le système de management mis en place par :
AFNOR Certification certifies that the management system implemented by:

PLEIADES INSTRUMENTS

pour les activités suivantes :
for the following activities:

ETUDES R&D, FABRICATION ET MAINTENANCE
DE MATERIEL DE MESURE OPTO-ELECTRONIQUE.

RESEARCH AND DEVELOPMENT ENGINEERING, MANUFACTURING
AND MAINTENANCE OF OPTO-ELECTRONIC MEASUREMENT SYSTEMS.

a été évalué et jugé conforme aux exigences requises par :
has been assessed and found to meet the requirements of:

ISO 9001 : 2015

et est déployé sur les sites suivants :
and is developed on the following locations:

4, rue de la Sure FR - 38600 FONTAINE

Ce certificat est valable à compter du (année/mois/jour)
This certificate is valid from (year/month/day)

2020-07-16

Jusqu'au
Until

2023-04-06

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This document is electronically signed. It stands for an electronic original with probatory value.

Julien NIZRI
Directeur Général d'AFNOR Certification
Managing Director of AFNOR Certification



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