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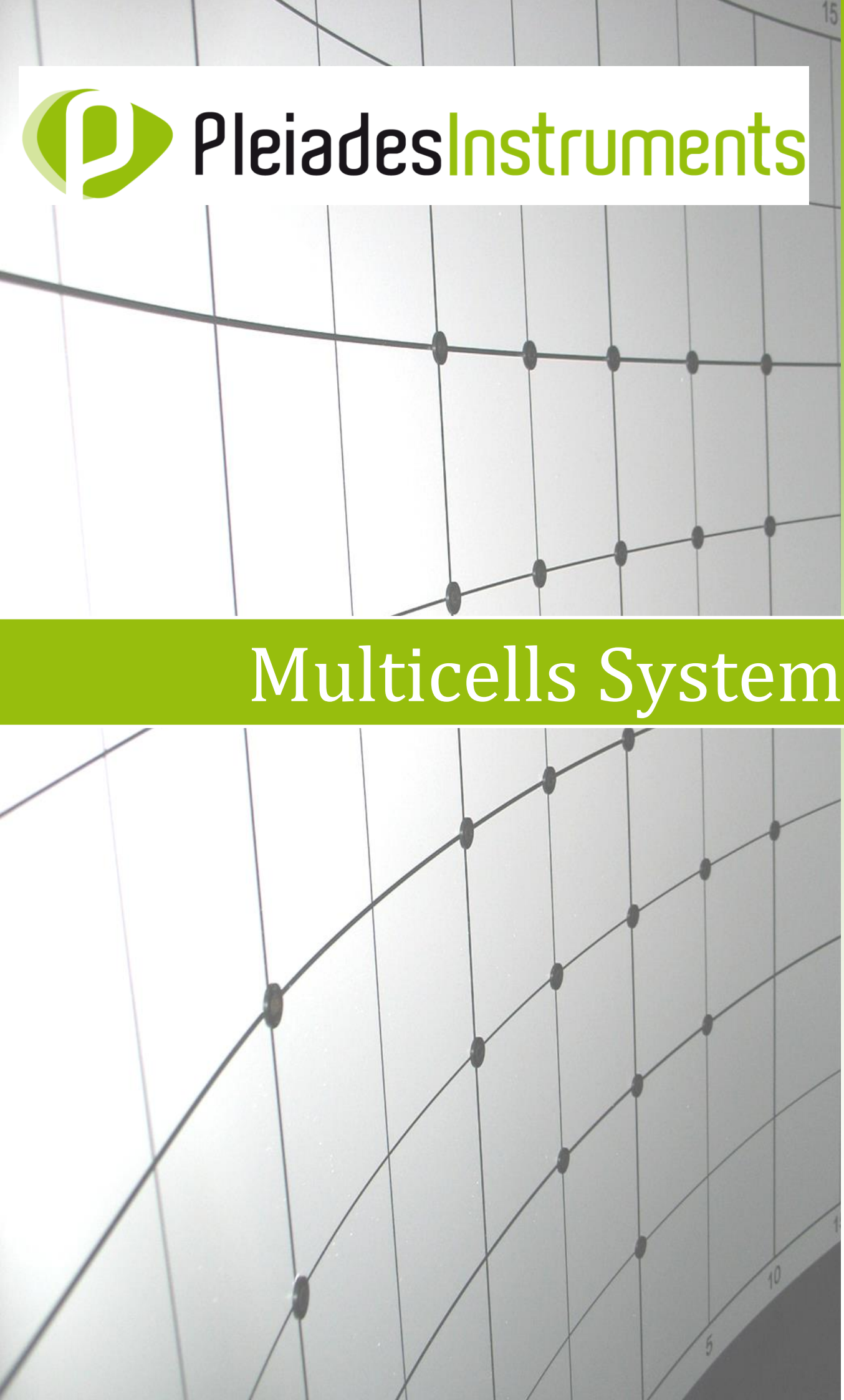

Multicells Systems

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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.

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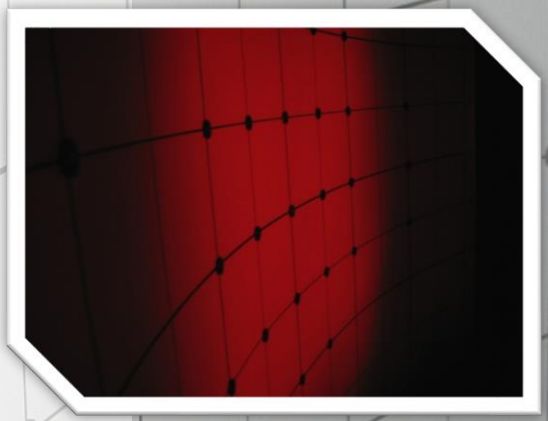
Multicells System for Signaling

Multicells rearlight reduced photometric systems allow measurement and qualification of rearlight 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 multicells system for signaling has many assets :

- Stand alone system.
- Compact.
- High maximum load (25kg/55pounds).
- Large measurement range: 0.01 to 1500Cd.
- High photometric resolution.
- 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.
- Configurable number of cells.
- Different measurements modes.
- High quality and repeatability of the measurements.
- Instant measurement.
- No photometric room required.
- Easy to use software, allowing different kinds of measures, 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.
- Reasonable price.



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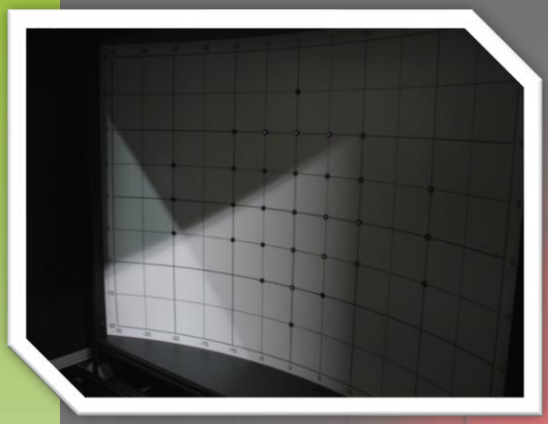
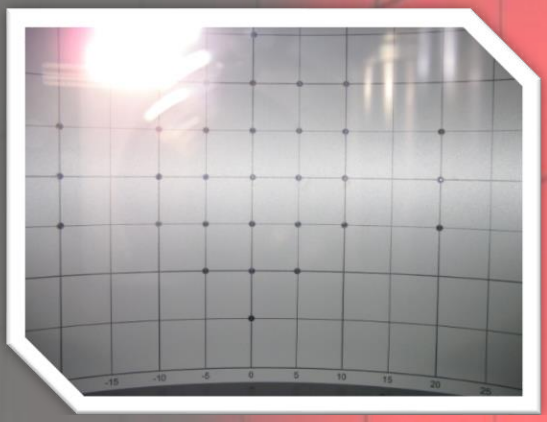
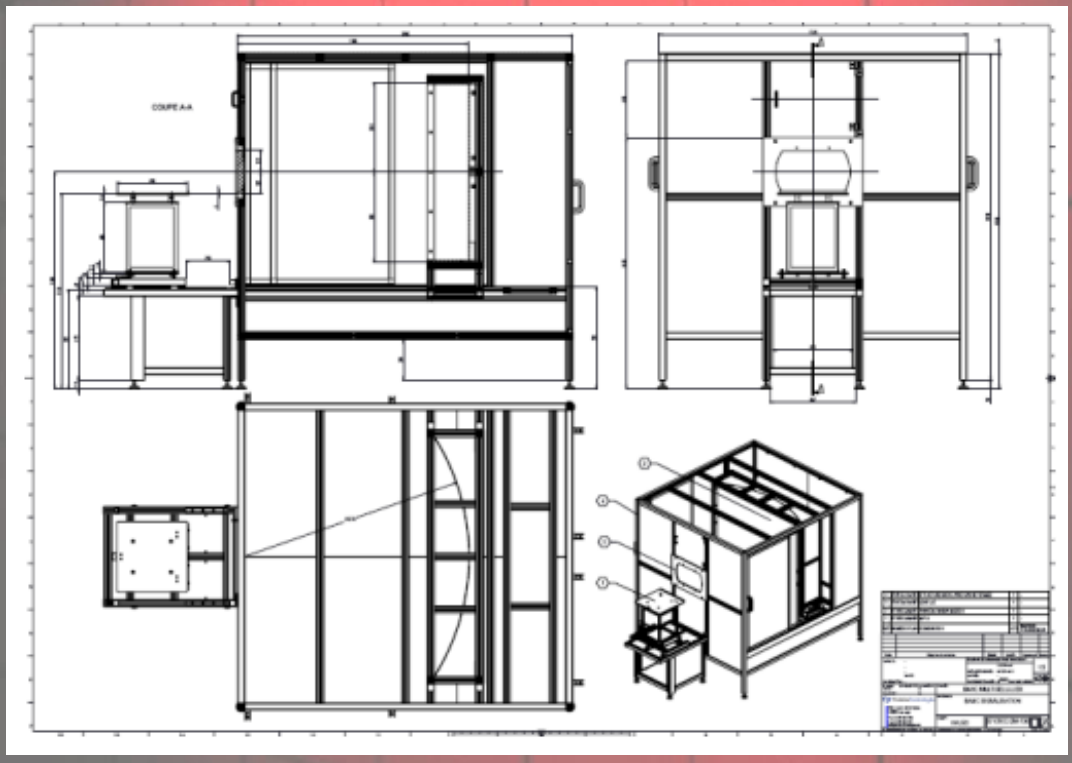
Multicells system for signaling characteristics:





Measurement cells	31 up to 62 cells
Photometric range	0,01 to 1500 Candela
Photometric resolution	4 digits
Display frequency	1 Hz
Measurement Mode	Continuous
	PWM
	Blinking
Power Supply	One power supply: 25V/7A
	Setting accuracy
	1µV ±(0,05% FS) 0,01mA ±(0,2% FS)
	Weight: 240Kg
Multicells System Signaling Size	Height: 1.90m
	Width: 1.75m
	Length: 2.70m
Power requirements	230V/50Hz/16A
PC requirements	Processor: DualCore 2.7 GHz
	RAM: 2Go
	Software: ALPES, Pack Office



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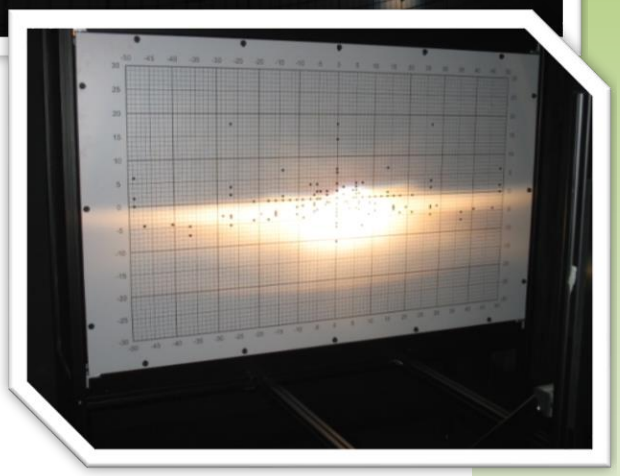
Multicells System for Lighting

Multicells headlight reduced photometric systems allow measurement and qualification of headlight products according to different standards (SAE, ECE, Japan) on short distance through 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.

As an option you can choose to add cells, to enclose the system…etc.



Multicells systems for lighting have many assets :

- Stand alone system.
- Compact.
- High maximum load (25kg/55pounds).
- Large measurement range: 0.01 to 450 lux.
- High photometric resolution.
- Thanks to their design, our devices are among the most compact on the market.
- Short measurement distance.
- Motorized rotating and vertical stages.
- Configurable number of cells.
- Different measurements modes.
- High quality and repeatability of the measurements.
- Instant measurement.
- Easy to use software allowing different kinds of measures, 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.
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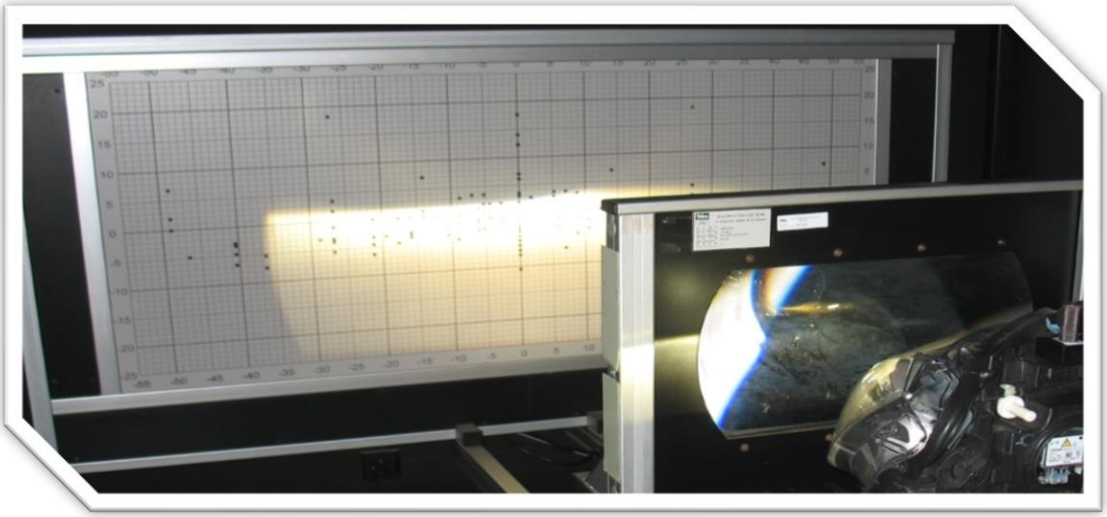

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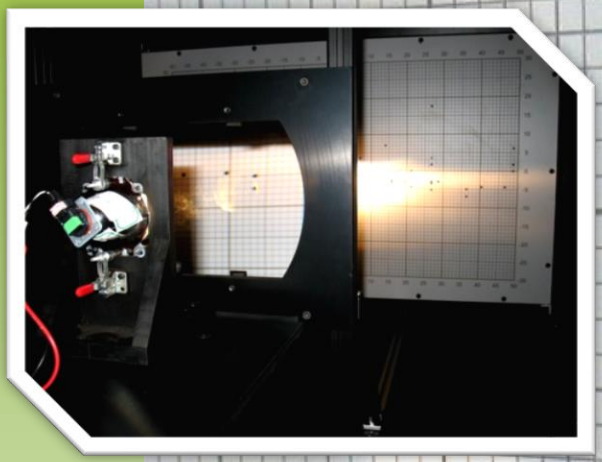
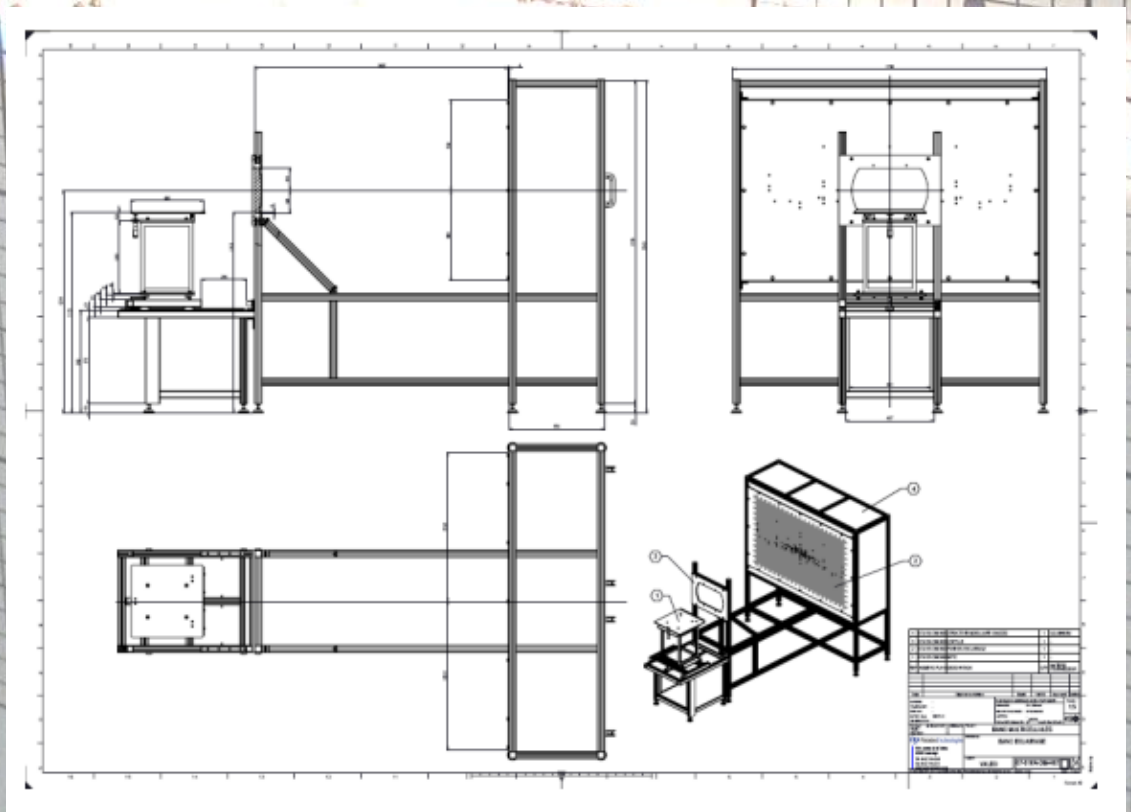
Multicells system for lighting characteristics:



Measurement cells	up to 200 cells
Photometric range	0,01 to 450 lux
Photometric resolution	4 digits
Display frequency	1 Hz
Measurement Mode	Continuous
	PWM
Power Supply	Two power supplies: 18V/20A
	Setting accuracy
	1µV ±(0,05% FS) / 0,01mA ±(0,2% FS) 10µV ±(0,1% FS) / 0,01mA ±(0,2% FS)
	Weight: 150Kg
Multicells System Lighting Size	Height: 1.85m
	Width: 1.74m
	Length: 2.70m
Power requirements	230V/50Hz/16A
PC requirements	Processor: DualCore 2.7 GHz
	RAM: 2Go
	Software: ALPES, Pack Office



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Multicells Systems & options

Pleiades Instruments has designed different kinds of Multicells systems to fit the specific needs of our clients. The designation of our devices is the following:

Multicells Systems

MES_S	MES_L	MES_R
Signaling	Lighting	Retrometer system

You will find below options and spare parts that can be added to our system :

Cells package MES_OCP	• Package with DAQcard , CECAcard, 32 addional cells, specific wires...
Power supply MES_OPS	• Agilent power supply • TTI power supply (only for lighting)
Lens MES_OSL	• Spare lens
Motorized stage MES_OVS/MES_ORS	• Motorized vertical stage • Motorized vertical & rotating stage
Wires MES_OAW	• Additional specific wires to connect products to power supply
Reference Lamp MES_ORL	• Signaling reference lamp • Lighting reference lamp
Upon request	• Periscope, colorimetry option... • Maintenance contract

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Options

Power supplies MES_OPS

Power supplies are used to adjust the current/voltage going through products. TTI power supply is used for lighting equipments (18V-20A, accuracy of measurement: 0,01%) whereas Agilent power supply is used for signaling systems (25V-7A, accuracy of measurement: 0,05%).

Cells package MES_OCP

Cells can be added on the panel to improve measurement accuracy. The cells package contains 32 cells, wires, a CECA card and a DAQ card.

Lens MES_OSL

Lenses are used to reduce the distance between products and detectors. Spare lens especially designed for multicells systems are available.

Wires MES_OAW

Pleiades Instruments provides specific spare 2m wires to connect products to power supplies (2 wires for regulation & 2 wires for power).

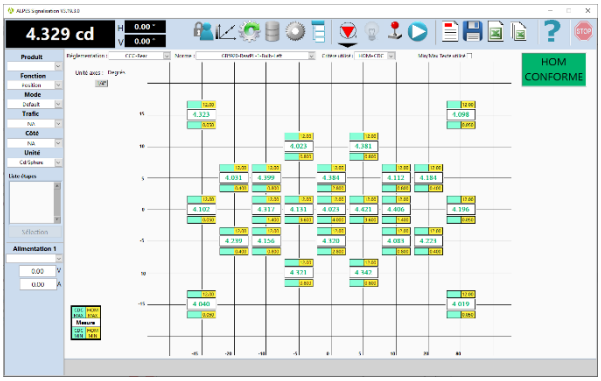
Reference lamps MES_ORL

Standard intensity/flux lamps are used to calibrate photometric devices. Pleiades Instruments provides signaling and lighting reference lamps certified by an accredited agency.

Software: ALPES.

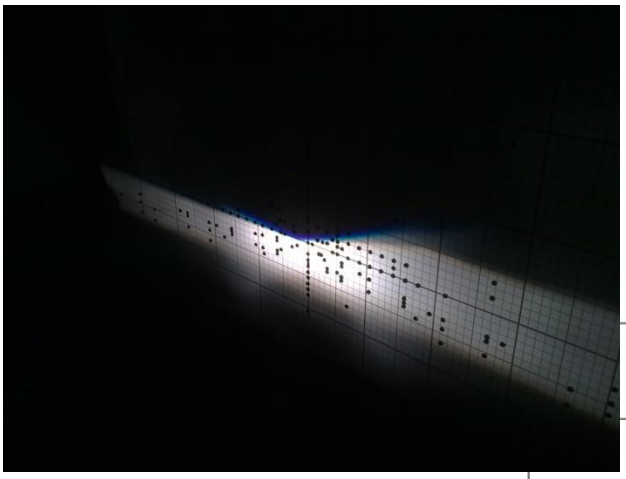
Our system is delivered with our fully applicative software called ALPES (Automotive Lighting Photometric Equipment Software). ALPES is an application used for controlling and running the photometric systems manufactured by Pleiades Instruments. It offers a user friendly and simplified user interface for operators in production mode, or a fully customizable software for administrators and Research & Development users.

ALPES is used for all the systems sold by Pleiades Instruments: goniophotometer and multi-cells, and for different products: signaling and lighting.

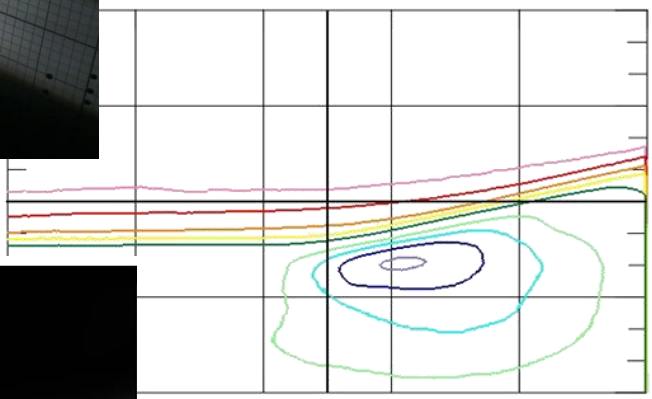


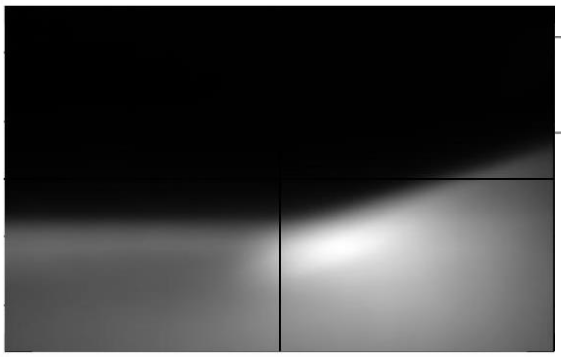
This software allows a large spectrum of measurements for complex analysis, production… A database of standards that can be tested is provided with the system. ALPES provides a report indicating if a measurement is conform to the standards. Moreover, lots of measurement types are available: point, scan, 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 is a very flexible software which means that it is possible for users to configure all measurements.
Updates are also regularly available online.





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