

 Laboratoř Fotovoltaičeských Systémů & Elektrochemických Zdrojů Katedra Elektrotechnologie ČVUT FEL	Task from course AE1B13SVS
	Task Name: Measurement of irradiance distribution
	Version: 2014/1.0

## Measurement of irradiance distribution

### Task A

Measure the distribution of incident light on photovoltaic (PV) module surface in laboratory. Use Mini-KLA device for measurement.

### Notes to measurement

- 1) Measure irradiance above every cell of PV module.
- 2) During measurement use the white curtain to eliminate influence of surrounding light on measured value.
- 3) Process results in the form of 3D graph.

### Task B

Compare values measured by following measuring instruments:

- 1) Lightmeter
- 2) Pyranometer
- 3) The exposure sensor of instrument Mini-KLA

### Notes to measurement

- 1) Measure using the above mentioned apparatus radiation of halogen bulb and fluorescent light.
- 2) Do not forget to subtract the influence of background, ie values measured at turned off light sources.
- 3) Measured values, a total of 2 x 3 data, evaluate in the conclusion of the measurement.

### Conclusion

One selected student will process the tasks mentioned above in the form of a paper report and a 5 minute presentation. The paper report gives student at the beginning of the next exercise, during the presentation of the conclusions of the measurements. Before exercise student uploads an electronic version of a paper and presentation to Moodle. There is not stable Internet connection in the laboratory, so the presentation will be projected from a student's flash drive. Recommended format is ppt, pptx.