

**CPV****RSE**

Outdoor CPV characterisation

**Location of the infrastructure :**

Piacenza (Italy)  
Lat. 45.035928° Nord  
Long. 9.760157° Est

<http://www.rse-web.it/laboratori/laboratorio/18>

**Contact person :**

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E-mail : [Gianluca.timo@rse-web.it](mailto:Gianluca.timo@rse-web.it)**Objectives :**

- Development of new characterization technique for CPV and support to industrial development

**Main features :**

- Spectral response
- Room temperature photoluminescence
- Temperature coefficient
- Dark I-V
- Outdoor I-V ( and determination of operative MJ cell temperature)
- Indoor I-V on CPV cells till to 10000 suns, with multispectral solar simulator (from March 2012)
- CPV module current mismatch analysis
- Direct and global radiation measurements
- Environmental data ( wind, air temperature, pressure, Humidity )
- Spectral characterization of direct radiation
- Tracker Pointing sensors

**Limitations or constraints :**

The outdoor test facility for CPV module and CPV system characterization can operate for a limited amount of hours during the day

**Typical services or results :**

- CPV Characterization of MJ solar cells and CPV modules
- Characterization of CPV systems and tracker accuracy
- Environmental data base

**Examples of research projects :**

- APOLLON (<http://www.apollon-eu.org/>)
- SCOOP ( Italian project under the frame "Industria 2015)