# Function description

Function name:

SolarCell\_Analyt

Including:

* Input\_SolarCell\_Analyt
* AR\_RAT
* Fresnel\_complex
* Snell\_complex

Evaluation of results:

* Plot\_Reflection
* Plot\_AllOpticEffects
* Plot\_f\_IQE
* Plot\_f\_IQE\_max
* Plot\_generation

# History:

|  |  |  |
| --- | --- | --- |
|  | Name | Assumptions |
|  |  |  |
|  | Internal front reflection (1. hit) | * Total reflection on fingers * On Si diffuse and direct share are reflected differently |
|  | Internal front reflection (subsequent hits) |  |
|  |  | * No absorption in fingers or AR from inside the cell |
|  |  |  |
|  |  |  |
|  | Absorption in the back layer |  |

Testing the model for consistency:

Determining parameters:

Important findings and problems:

* Using RAT algorithm is not possible if no AR-coating is included
* Material parameter diverge depending on the source
* Absorption and generation are equivalent. To get the absorption from the generation the latter needs to be divided by the number of incident photons

Determination of the different parameters: