

## Partial Discharge Test

on reverse side foils of PV modules  
 according to IEC 60664-1, IEC61730

27. August 2008

Company / Examined foil:

<b>Coveme S.p.a.</b>		
<b>DyMat APYE</b>		
PET white	50 micron	outside
Adhesive	11 micron	
Aluminium	9 micron	
Adhesive	11 micron	
PET	190 micron	
Adhesive	11 micron	
EVA (white)	100 micron	cell side

\* The EVA is not part of the directly encapsulation of the PV cells  
 For the PD Test the outer layers PET and Adhesive have been removed

Number of measurements: 10

Remarks: Strong Intermittent Ecxtinction Voltage

Extinction voltage		Deviation from the mean value (%)
Min. value in (V)	1017	-14,0
Mean value in (V)	1183	
Max. value in (V)	1253	5,9

The mean value minus the experimental standard deviation will be used to calculate the max. permissible voltage.

Experimental standard deviation: 77 V

Calculation of the max. permissible operating voltage on the basis of the ascertain values

**Basis: IEC 60664-1**
 $U_{max} = U_e \times 1,414 / 1,2 \times 1,25$ 

1,414 Calculation of the peak value  
 1,2 Safety factor (humidity, temperature, etc.)  
 1,25 Safety factor (double or reinforced insul.)

<b>Maximum permissible system voltage</b>	<b>1043 VDC</b>
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Responsible for Partial Discharge Testing

 Buisness Field Manager  
 Renewable Energies



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