

**PERFORMANCE RATING AND I-V MEASUREMENT (RTOS METHOD) OF EMERGING PV COMPARE BETWEEN INDOOR LIGHTING AND SOLAR SIMULATOR**

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In our study, we used RTOS method for I-V then the results showed better accuracy by eliminating in real time the acceptance effect (Figure 1). We also used this method to compare emerging PV cells with the latter cells exhibited promising power conversion efficiency and no hysteresis behavior under indoor lighting simulator, which classified will be follow as SEMI Doc 5979. In this study, we defined a performance ratio to compare between indoor lighting and solar and the results (Figure 2 and Table 1) will be show different performance trend for the different type PV in indoor/outdoor, which depends on device. It also will be shown performance rating of PV under the application of energy harvesting for indoor/outdoor (Table 1).

Keyword: performance rating, indoor lighting simulator, solar simulator.

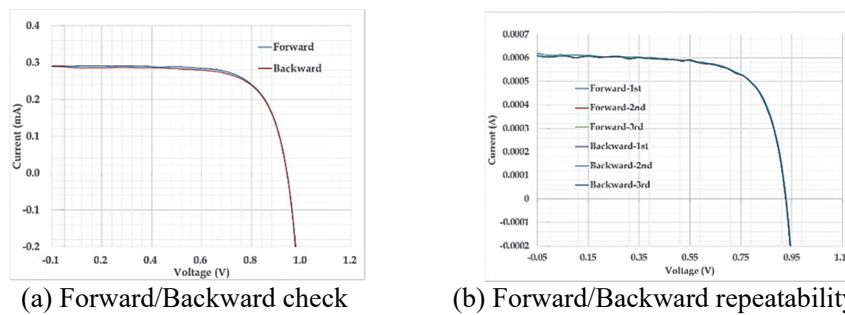


Figure 1: I-V of Perovskite (PSC) measured by RTOS method under solar simulator.

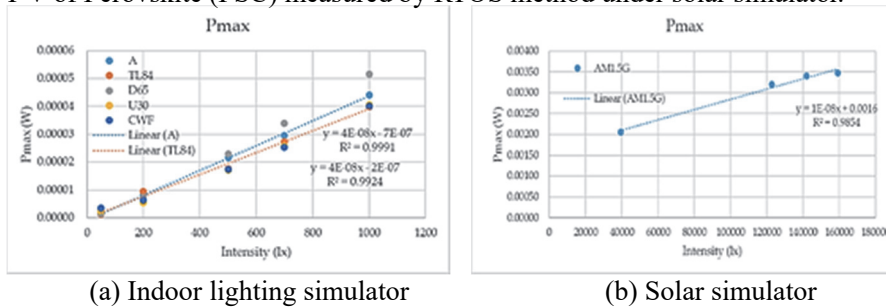


Figure 2: Light linearity of DSSC measured by indoor lighting simulator and solar simulator under varied lighting condition (I-V using RTOS method).

Table 1: Performance rating of emerging PV under indoor lighting and solar simulator

lighting	normalized performance rating of device		
	OPV	DSSC	a-Si
A	0.76	1.35	0.50
TL84	0.45	1.26	0.55
AM1.5G	1.00	1.00	1.00

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