

TEST REPORT
تقرير إختبار



Report No: 560/63C032/5/413/2022

- NIS Lab : Engineering and surface Metrology Lab.
اسم المعمل
- Issued For : ايفكا للصناعة
صالح الى
- Contact Information of the Customer : Tel: 01017839210
بيانات التواصل بالبريد
- Sample Specification : Solar Cell Plate_SCRT (Roughness Measurements)
وصف العينة
- Manufacturer :
اسم الشركة المنتجة
- Code : SCRT-01
كود
- Date of Receipt : 26/04/2022
تاريخ الاستلام
- Date of Test : 26/04/2022
تاريخ الإختبار
- Issue Date : 08/05/2022
تاريخ الإصدار

Approved by

Head of Laboratory

Dahi

Prof. Dr. Dahi Abdelsalam



NIS President

N. Khaled

Prof. Dr. Noha E. Khaled

TEST REPORT

تقرير اختبار

• Report No.	560/63C032/5/413/2022		
• Customer	ابفا للصناعة		
		• Date of Receipt	26/04/2022
• Tested by	Dr.Eng. Ahmed Elmelegy	• Date of Test	26/04/2022
• Number of pages	3	• Issue Date	08/05/2022

Sample Under Test

Sample Specification	Solar Cell Plate_SCRT (Roughness Measurements)
Manufacturer	---
Code	SCRT-01

• Enviromental Conditions

Temperature (°C)	(20±1)	Humidity (%)	(50±5)
------------------	--------	--------------	--------

• Test Method

The test was carried out according to NIS-63-OP-7.2/32 "Test of Surface Measurements "

• Traceability

Reference Device	Serial Number	Calibration Date	Certificate No.	Expanded uncertainty	Traceability
Roughness Tester	630412	20/09/2021	1928/63/2020	0.06 µm	NIS

• ISO 17025 Statement

All NIS laboratories implement the NIS unified quality management system which was built to be in compliance with ISO 17025:2017.

Tested by

Ahmed



Reviewed by

A Sobhy

TEST REPORT

تقرير اختبار



• Report No.	560/63C032/5/413/2022	
• Conformity Statement		
Conformity Criterion	Not applicable	
Decision	N/A	

• Test Results

Parameters	Cycles	Average Roughness value Ra (μm)	U (μm)
Ra (μm)	Before cleaning	0.48	0.10
	After 200 Cycles	0.41	0.10
	After 200 Cycles	0.40	0.10
	After 200 Cycles	0.48	0.15
	After 200 Cycles	0.53	0.10
Hair Type	micro-fiber towels		



the solar panel was cleaned using a robot with micro-fiber towels, the roughness measurements were carried out before and after the cleaning process



The data in the above table applies only to those samples specifically listed on this test report

• Uncertainty Statement

The combined standard uncertainty is calculated based on JCGM 100:2008 which include at least the standard uncertainty reported for the reference standard, the standard uncertainty for the measurement process, the standard uncertainty for any uncorrected errors. The combined standard uncertainty is multiplied by a coverage factor (k) of 2 to provide an expanded uncertainty, which defines a level of confidence of approximately 95 percent (95.45 %). The expanded uncertainty presented in this certificate/report is consistent with the ISO/IEC GUIDE 98-3:2008 "Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)".

Tested by
Ahmed

Page 3 of 3

Reviewed by
A. Sobhy