



SR EL TEST

DESCRIPTION

This new Electroluminescent Test by Sunroyal is a revolutionary machine, using the new linear cameras SWIR (Short Wave Infrared) with a InGaAs sensor.

The current EL test machines, which use CCD camera, need long time of exposure and a box completely closed without light in order to make the test because CCD cameras are very insensitive to radiations emitted by silicon in the band beyond 1100 nm.

SWIR camera, instead, has an Q.E spectrum which ranges from 900 to 1700 nm. Therefore, it results to be the ideal camera for EL test.

It is very important that the EL test is performed BEFORE laminating the module so that you can, in case, replace some faulty cells or strings, guaranteeing the maximum performance of the module. In this way, you can have a real saving because all modules can be tested before proceeding with the lamination. After the lamination process, it is not possible to substitute cells or strings anymore.

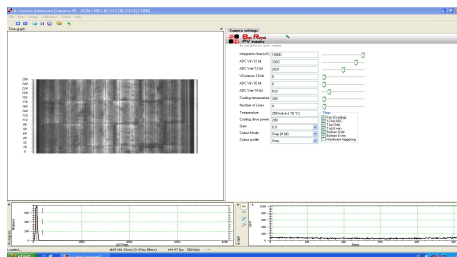
The machine is very compact and it has been studied to be put into existing lines.

You can make a first quickly test in order to see if all cells have the same light emission.

If the test is positive, the panel is OK and it can be laminated; if the test is negative, you can do the test again increasing the exposure to identify with much more accuracy the cell or the cells which have lower performance compared with the others.

The time needed for testing goes from 5 to 15 seconds depending on the required resolution.

The SR EL Test standard machine belongs to the GO – NO GO testing, that is, it helps you to find the faulty cell or string that has to be replaced, without analysing the specific fault. This last one can be identified using the Super HD model which has a resolution of 33 Mpixel.





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TECHNICAL DATA

EL System	SWIR Linear Camera (InGaAs sensor)
Models	Stand alone to in-line automatic
Resolutions	Standard, HD, Full-HD and Super HD
N° SWIR cameras	From 1 to 6
Camera life	typically more than 50,000 hours
Test Area max	1950 x 950 mm (more on request)
Resolutions lines	from 512 to 4096 lines (up to 12288 on request)
Resolutions pixels/module 60cells	From 0.5 Mpixel (standard) to 33 Mpixel (Super HD)
Acquisition time (horizontal)	From 5 (standard) to 15 seconds (Super HD)
Lamination inspection	Pre, post and final.
Automatic contact unit (pre/post)	Yes, on request.
Interfaces	Ethernet, Modbus and Profibus
Module types	Non laminated, laminated and framed modules
Max voltage power module supply	60 V
Max current module supply	1-4 A
Module type	mc-Si, pc-Si, thin film (CIG, CIGS, a-Si and CdTe)
Load system	active electronic current load
Computer system	PC with software system under O.S. Windows™ 7
Type connection	RJ45 Ethernet
Automatic load/unload module	optional
Laser printer	optional
Label thermal printer	optional
Bar code reader	optional
Power Supply	230 V 50 Hz 2 A 500 W
Overall dimensions	300 mm x 1200 mm x 800 mm (except TFT monitor)

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