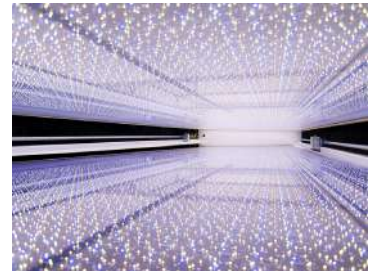
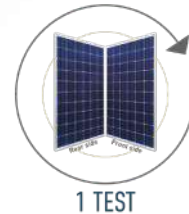


DOUBLE LIGHT SOURCE



## CHARACTERISTICS

- OPTIMIZED CONFIGURATION FOR BIFACIAL MODULES
- DOUBLE LED LIGHT SOURCE
- NO RECHARGING TIME BETWEEN TESTS
- SOFTWARE SIMULATES FINAL CONDITIONS OF INSTALLATION
- LED SOURCE LIFE TIME MORE THAN 50 MILLION PULSES
- SINGLE TEST FOR TWO MODULE SIDES
- NO PANEL FLIPPING REQUIRED
- PRECISE I-V CURVE MEASUREMENT USING DIFFERENT VOLTAGES
- DIFFERENT IRRADIANCE LEVELS SETTABLE
- SUITABLE FOR 60, 72 CELLS MODULES

SUITABLE FOR  
**THIN-FILM**  
**BACKCONTACT**  
**POLY/MONO**  
**PERC, HIT**  
**BIFACIAL**



WORKS WITH  
**FRAMED &**  
**FRAMELESS**  
PV MODULES

## OPTIONALS

**CUSTOMIZED SPECTRUM RANGE**

**AUTOMATIC CONTACTING**

**BYPASS DIODE TESTING**

**CUSTOMIZED ILLUMINATED AREA**

Bigger or smaller illuminated area

Images for illustrative purposes only, the sun simulator Ecosun Bifacial is in the development phase.

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## TESTING CAPABILITIES

TYPE OF MODULE	Mono, Poly, PERC, HJT, Bi-Facial, Thin-Film, Back contact, Glass+Glass
BI-FACIAL MODULE TESTING	Double sided LED Light Source (top & Bottom) for testing Bifacial Modules
MAX. MODULE DIMENSION	1400mm X 2200mm (Customisation available)
RECOGNITION	Certified by TUV Intercert Lab
CURRENT MEASUREMENTS	0.5-25 A (other ranges on request)

## LIGHT SOURCE

TYPE OF LIGHT SOURCE	LED (18 Different Types)
IRRADIANCE FRONT SIDE	1200 W/m <sup>2</sup>
IRRADIANCE REAR SIDE	100-1200 W/m <sup>2</sup>
SUN SIMULATOR CLASS (CERTIFIED BY TUV)	Class A+A+A++
NON-UNIFORMITY	< ±1% (Class A+)
SHORT TERM INSTABILITY (STI)	< ±0.125% (Class A++)
LONG TERM INSTABILITY (LTI)	< ±0.125% (Class A++)
REPEATABILITY	< ±0.5%
SPECTRUM	±8% (Class A+)
SPECTRAL RANGE	300 - 1200 nm
STANDARD PULSE DURATION	100ms - 200ms
"LONG PULSE CAPABILITIES (FOR REDUCING CAPACITVE EFFECT, CAPABLE TO TEST HIGH EFFICIENCY MODULE, SUITABLE FOR THIN FILM MODULES)"	3 - 5 sec
LIGHT SOURCE LIFETIME	> 50 Million Pulses
TIME BETWEEN 2 TESTS	No recharging time required between 2 consecutive test

## ELECTRONIC LOAD

VOLTAGE	18V - 120V (Other ranges available on request)
CURRENT	12A - 120A (Other ranges available on request)
MEASUREMENT READING	4 Wire Kelvin Measurement connection
MEASUREMENT ACCURACY	± 0.2%
REPEATABILITY	Better than 99.80%
CALIBRATION	Traceable to accredited Lab
TEMPERATURE SENSORS	"Machine consist of 2 sensors: 1. One sensor to measure the Ambient temperature 2. IR Sensor to measure the Module temperature"

## UTILITY SPECIFICATIONS

ELECTRICAL CHARACTERISTICS	
LINE	3P+N+E
VOLTAGE	400 V
FREQUENCY	50/60 Hz
PEAK POWER	35 kW
POWER CONSUMPTION	5 kW
MAX CURRENT	55 A
PRE FUSE	100 A
AIR CHARACTERISTICS	
AIR PRESSURE	6 bar
AIR CONSUMPTION	<1 NL/1'
AIR PEAK FLOW	<1 NL/1'
AIR CONNECTION	1/4"
DIMENSIONS	
HEIGHT	2000 mm
LENGHT	5800 mm
WIDTH	3250 mm
CE WEIGHT	3650 kg

## COMPUTER HARDWARE / SOFTWARE

PROCESSOR	Latest Intel I5 or better
STORAGE	1TB SSD Driver
DATABASE	SQL
OPERATING SYSTEM	Windows 10
MONITOR	24"
INTEGRATION TO MES	Optional