KSON®
INSTRUMENT TECHNOLOGY

太阳能试验机
Climatic Chamber for PV Modules

www.kson-cn.com

Advanced Technology
科技创新技术

两岸第一家通过国际认证
KSON - the first climatic chamber approved by international certification body in cross-Straits.

太阳能电池 温循湿冷冻量测系统
Measurement System for PV Modules

- 同一套系统适用於晶圆、薄膜太阳能电池
- 可执行温度循环、湿冷冻的动态量测试验
- 符合 IEC61215、IEC61646、IEC62108 UL1703、IEC61730等试验要求
- 国家级认证实验室、晶圆薄膜太阳能电池厂商采用

Summary:

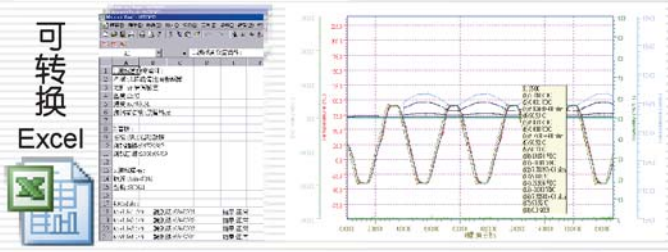
- One-stop system suitable for both crystalline silicon and thin-film PV modules
- Capable to perform dynamic measurement for thermal cycling and humidity-freeze tests
- Meets IEC61215, IEC61646, IEC62108, UL1703 and IEC61730 test requirements
- Adopted by state-level certified laboratories and PV modules / solar panel companies

太阳能电池规范 Test Standards	IEC61646	IEC61215	UL1703
太阳能电池类型 Type of PV Module	薄膜太阳能 Thin-film	晶圆太阳能 Crystalline silicon	晶圆&薄膜太阳能 Flat-plate (Crystalline silicon & Thin-film)
监测模组内部电路连续性 Monitoring the continuity of the internal circuit	◎ ※	◎ ※	◎ ※
监测边框或支撑架之间绝缘完整性 Monitoring the integrity of the insulation between the terminals and the frame or supporting structure	◎ ※	◎ ※	◎ ※
与温度搭配施加模组STC最大功率电流 Applying a current equal to the STC peak power current		◎ (above 25℃ during 200 cycle)	
纪录测试过程模组温度 Recording the module temperature throughout the test	◎ ※	◎ ※	◎ ※

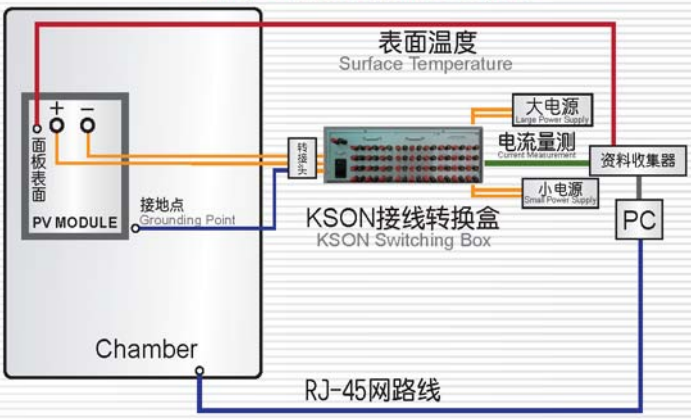
备注：热循环Thermal cycling ◎　　湿冷冻Humidity-freeze ※

量测系统显示画面

可转换 Excel



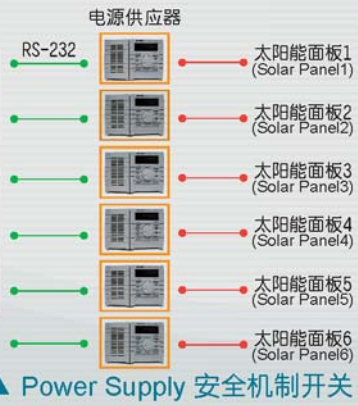
▲量测系统画面▲
Display Picture of Measurement System



▲系统接线示意图▲
System Wiring Diagram

双向安全机制保护 ■ Two-way Security Mechanism Protection

RJ-45 网路线



▲ Power Supply 安全机制开关 ▲

※条件(Condition)：
1.停机或故障(Chamber shuts down or breaks down)
2.温度超过100℃(Temperature exceeds 100℃)
3.通信中断(Communication is interrupted)

Key Value

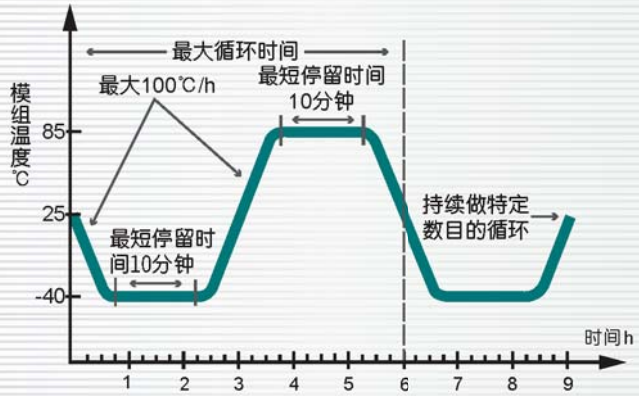
核心价值

符合国际规范

IEC 61215 、IEC 61646、IEC 62108、UL1703、GB19064、GB18911

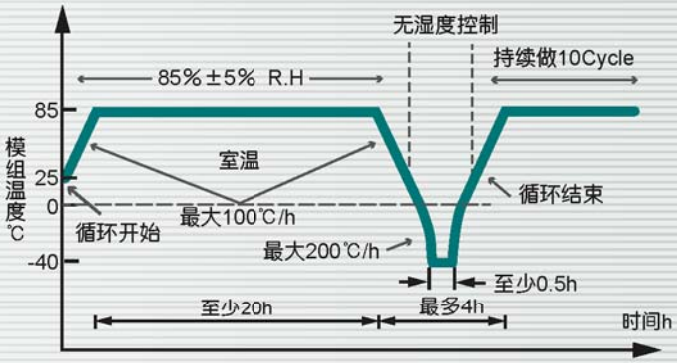
■ IEC61215、IEC61646、GB19064
温度循环试验规范摘要 (Thermal Cycling Test)

-40℃ ±2℃(10min)←→85℃±2℃(10min)



■ IEC62108、GB19064湿冷冻试验规范摘要
IEC62108、GB19064 Humidity-freezing cycle test

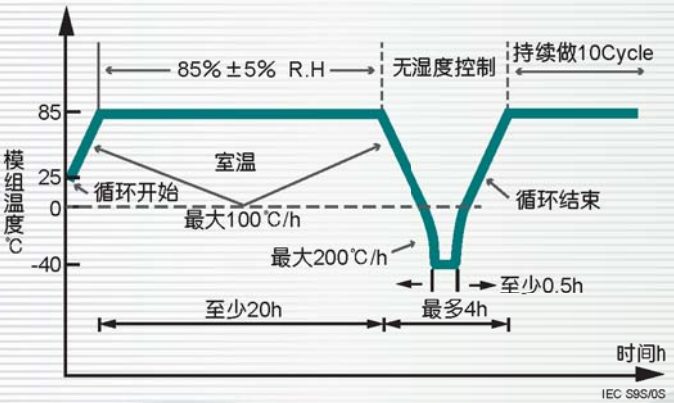
85℃ ± 2℃ /85%R.H ± 5%R.H(>20h)←→ -40℃



■ IEC61215、IEC61646、GB18911湿冷冻试验规范摘要
IEC61215、IEC61646、GB18911 Humidity-freezing cycle test

85℃ ± 2℃ /85%R.H ± 5%R.H(>20h)←→ -40℃

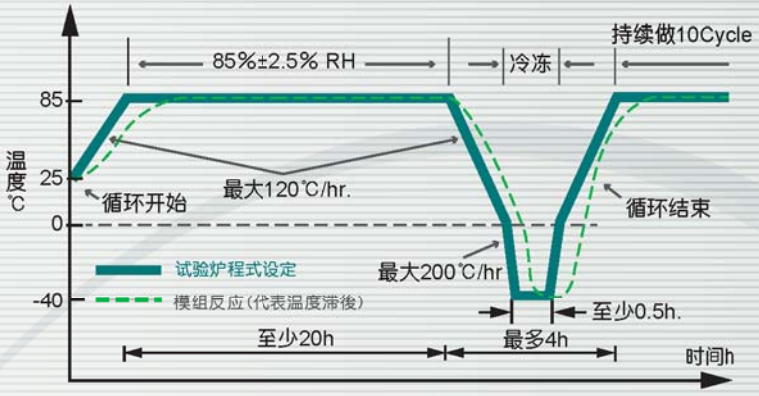
(-40 ℃驻留>0.5h含升降温时间最多4小时)



■ UL1703湿冷冻试验规范摘要
UL1703 Humidity-freezing cycle test

85℃ ± 2℃ /85% ± 5%(>20h)←→ -40 ℃

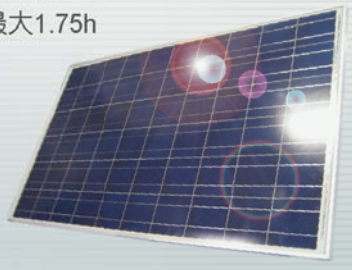
(-40 ℃驻留>0.5h含升降温时间最多4小时)

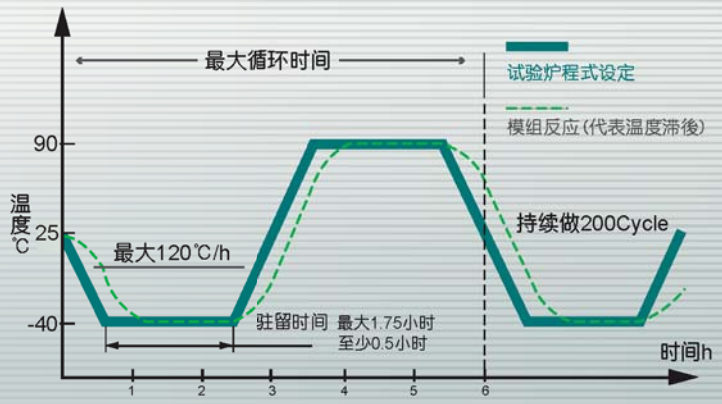


■ UL1703
温度循环试验规范摘要 (Thermal Cycling Test)

-40℃←→90℃、温变率小於120℃/h

驻留时间：最小0.5h、最大1.75h





KSON

Convenience

弹性安全

健康新主张

■ 实验结束测试区空气自动与手动排出装置
Automatic&Manual air exhaust device in testing area at the end of the experiment

终极安全保护

■ 停电跳机时紧急抽排风保护待测品安全
Emergency pumping exhaust at blackout shutdown to protect articles to be tested

RS-485 温度感测装置前端过温保护
Over-temperature protection at front end of temperature sensing device

RS-485 AC Driver

警报蜂鸣器
Warning Buzzer

抽排风装置
Pumping Exhaust Device

测试区空气排出
Air exhaust in testing area

弹性治具设计

■ 符合多种尺寸太阳能模组(Solar module in a variety of sizes)

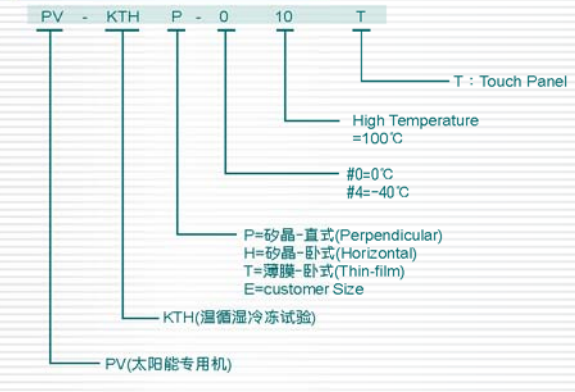
规格列表

规格(Specification)	PV-KTHP-010T	PV-KTHP-410T	PV-KTHH-010T	PV-KTHH-410T	PV-KTHT-010T	PV-KTHT-410T
内箱尺寸Inside Dimensions(W.D.H)cm	120x170x225		120x225x150		110x175x160	
外箱尺寸Outside Dimensions(W.D.H)cm	177x279x267	192x324x267	177x337x192	192x405x192	167x287x202	187x347x202
待测品尺寸Specimen Dimension(W.H.D.)cm	200x110x5(6 pcs)				140x110x5(8 pcs)	
待测品摆设方式	直式(Stand)		卧式 (rear horizontal circulating air fans)			
出风方式Airstream	後吹式					
内容积(Inside Capacity)/公升(L)	4590L		4050L		3080L	
温度范围Temperature Range	0℃~100℃	-40℃~100℃	0℃~100℃	-40℃~100℃	0℃~100 ℃	-40℃~100℃
湿度范围Humidity Range	20%～95%					
升温速率Heating Rate	20℃～100℃ 50min(空载)	-40℃～90℃/80min (有载下325kg 含台车85kg)	20℃～100℃ 50min(空载)	-40℃～90℃/80min (有载下220kg 含台车70kg)	20℃～100℃ 50min(空载)	-40℃～90℃/80min (有载下270kg 含台车70kg)
降温速率Cooling Rate	20℃～0℃ 60min(空载)	90℃～-40℃/110min (有载下325kg 含台车85kg)	20℃～0℃ 60min(空载)	90℃～-40℃/110min (有载下220kg 含台车70kg)	20℃～0℃ 60min(空载)	90℃～-40℃/110min (有载下270kg 含台车70kg)
温度分布偏差Temperature Variation℃	±1.5℃					
湿度分布偏差Humidity Variation%	±4%					
温度稳定度Temperature Stability	±0.5℃					
湿度稳定度Humidity Stability	±2%					
温度解析度Temperature Resolution	0.01℃					
湿度解析度Humidity Resolution %R.H	0.1%					
循环系统Circulation System	机械式的对流系统(Mechanical Convection System)					
冷冻系统Cooling System	二元式/一元式 (Caseade Refrigeration System)					
冷却方式Cooling Method	水冷 (Water Cooling)					
加热系统Heating System	平衡温度(Balance temperture) P.I.D.+P.W.M.+S.S.R					
加湿系统Humidification System	平衡湿度(Balance Humidity) P.I.D.+P.W.M.+S.S.R					
加湿给水系统Humidification Water Supply	自动水位控制(Automatic Water Regulating)					
控制器Controller	IPC Baced Touch Panel					
电源Power Source	AC 220 V / 3 ϕ :AC 380V / 3 ϕ					
水质Water Quality	蒸馏水(Distilled Water Only)					
环境温度Ambient Temperature	+5℃~+30℃					
扩充设备Optional Accessories	量测系统、时序插座、e化管理系统 (Measurement System)(Power Supply Socket)(Communication Interface)					

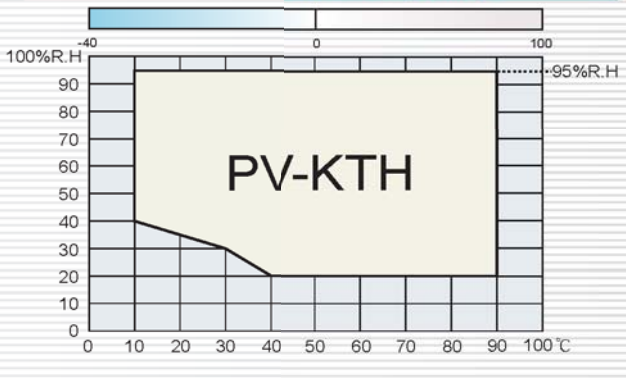
※以上规格，请以实体报价为主，最终解释权归本公司所有

For Above Accessories, Their Actual Specifications May Vary. The Right Of Final Interpretation Belongs To Our Company.

Model Code



温湿度可控制能力范围表 Temperature&Humidity Range



www.kson-cn.com

昆山庆声电子科技有限公司

昆山 江苏省昆山市周市镇339省道518号

TEL：(0512)57764900

FAX：(0512)57764100

E-mail：kson@kson.cn

设备咨询与售后服务

新设备询价，快扫公众号二维码

-营业项目-

恒温恒湿机（标准型/超低湿型/等温型/太阳能专用/光显示器专用）/KESS应力筛选试验机/冷热冲击机（三箱气体式/二箱移动式）/热应力复合机/自然对流试验机/恒温恒湿室/高压加速寿命试验机/复合型环境试验机/智慧型高阻计/超高阻计/精密温湿度计/切换式超高电阻箱/导通电阻量测系统/数位收集系统/高速离子迁移量测系统/表面绝缘电阻量测系统/e化管理系统/预烧室/实验室机台管理系统/

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