

Stationary Thermal Shock Chamber 300°C Type TSA Series

300°C High-Temperature Exposure Control for Heat-Resistant Testing

300°C is often required on the test for Power semiconductors. In addition, it is required the heat-resistant to handle the high-temperature stress caused by large currents. In this TSA, you can operate the 300°C.



Features

- **High-temperature exposure up to 300°C**
High-temperature exposure: +60°C to +300°C
Low-temperature exposure: 0°C to -65°C (-70°C*1)
- **Stationary test space design to minimize the effects of vibration**
The stationary test space ensures samples are less affected by vibrations than equipped with a mobile lifting cage for the automatic transfer of the specimens, allowing high accuracy and reliability.
- **Automatic door lock (standard equipment)**
The door includes an automatic door lock to prevent burn injuries. The automatic door lock function activates when the internal chamber temperature reaches 190°C, preventing the door from being opened accidentally.
- **Excellent usability**
Easy access to the specimen through the cable port which is designed to make it easier for typical power supply or measurement applications.



Test area with left
hinged door

*1: The low-temperature exposure range varies by model. See "Specifications / lineup" on next page for details.

Specifications/Lineup

Model		TSA-73ES-A/W	TSA-103EL-A	TSA-203ES-W	TSA-303EL-W	
System		Two-zone/three-zone system provided by damper switching				
Performance*2	Test area	High-temperature exposure temperature range	+60°C to +300°C			
		Low-temperature exposure temperature range	-70°C to 0°C	-65°C to 0°C	-70°C to 0°C	-65°C to 0°C
		Temperature fluctuation*3	±1.0°C			
	High-temperature chamber	Pre-heat upper limit	+350°C			
		Temperature heat-up time	Ambient temperature → +350°C			
			40 minutes or less	45 minutes or less	40 minutes or less	40 minutes or less
	Low-temperature chamber	Pre-cool lower limit	-75°C			
		Temperature pull-down time	Ambient temperature → -75°C			
			45 minutes or less	60 minutes or less	45 minutes or less	45 minutes or less
	Temperature recovery performance	Temperature recovery time		20 minutes or less		
		Conditions	High-temperature exposure	+250°C, 60 minutes		
			Low-temperature exposure	-40°C, 60 minutes		
Sensor position			Upstream			
Specimen			Without specimen or load			
Dimensions	Internal dimensions (mm) W × H × D		410 × 460 × 370	650 × 460 × 370	650 × 460 × 670	970 × 460 × 670
	External dimensions (mm) W × H × D		1310 × 1900 × 1505	1550 × 1900 × 1505	1550 × 1900 × 1805	1870 × 1900 × 1805
Weight		Approx. 1050 kg	Approx. 1050 kg	Approx. 1400 kg	Approx. 1420 kg	
Utility requirements	Power supply		200 VAC ±10% or less, 3-phase, 3 W, 50/60 Hz			
	Maximum current		78 A	70 A	120 A	
	Cooling water flow		3.1 m ³ /h	—	4.6 m ³ /h	
	Water pressure		0.2 to 0.5 MPa	—	0.2 to 0.5 MPa	
	Piping connection port diameter		32 A	—	32 A	
	Air supply pressure		0.4 to 0.7 MPa			

*2: Values at an ambient temperature of +23°C and a cooling water temperature of +25°C

*3: Performance indication conforms to IEC 60068-3-5:2001 (JIS C 60068-3-5:2006) and JTM K 07-2007

ESPEC CORP. <http://www.espec.co.jp/english>

Head Office
3-5-6, Tenjinbashi, Kita-ku, Osaka 530-8550, Japan
Tel: +81-6-6358-4741

● Contact a sales office for more information.

● Specifications, external appearance, and other descriptions are subject to change without notice due to product improvements.
We appreciate your understanding.