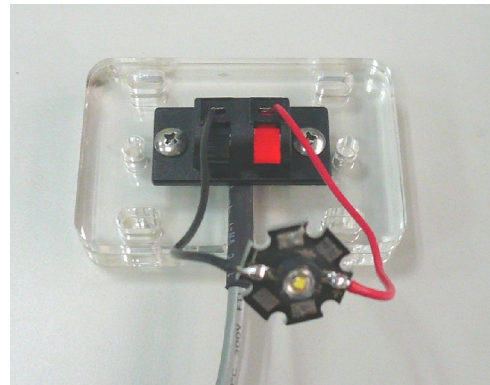


9383 LED T_j & Thermal Resistance Measurement Apparatus

LED industry is developed vigorously and applied to illumination considerably. LED's working temperature is crucial to products' reliability and performance. As a result, the thermal solution design determines whether it can be mass produced or not.

Since LED development is in an initial stage, there is no standard method for its thermal resistance test. Since the temperature measurement of diode array is the most common method for real application, LW-9383 apparatus was developed by considering the JEDEC JESD 51-1 Standard for measuring T_j and thermal resistance of LED. As cooperating with the automatic measurement software and a natural convection thermal chamber, it is useful to know the instantaneous LED performance and reliability.

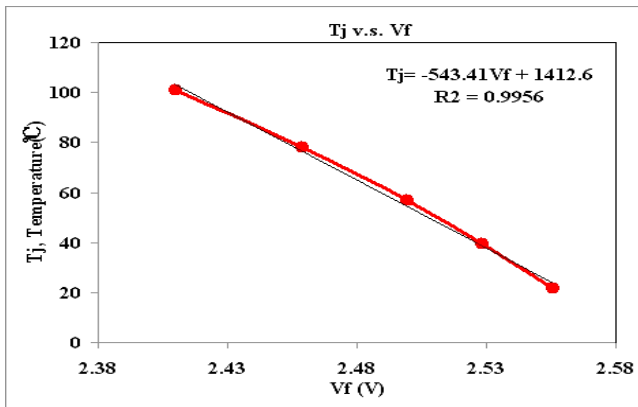


Features

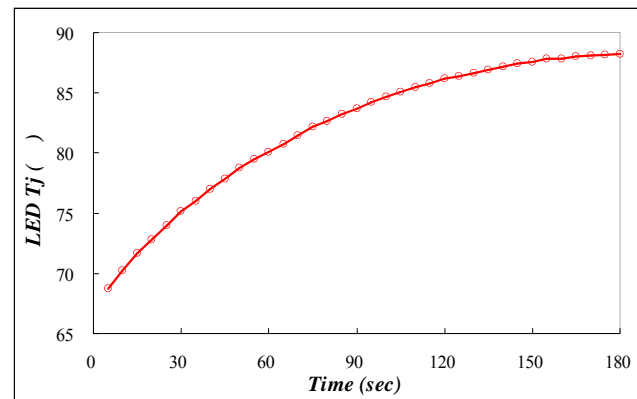
- Available for the measurement of LED T_j and thermal resistance R_{jc}.
- Modified JEDEC JESD 51-1 Standard of the diode array.
- Fast data acquisition rate to reveal actual LED T_j value.
- To measure LED T_j and R_{jc} under different working power.
- Available for reliability test.
- Data acquisition automatically and output as Excel files.
- Cooperate with LW-9022S natural convection thermal chamber to get specific calibration curve of K factor



Applications



Temperature calibration curve
Correlation of Tj and Vf; the K factor



Correlation of LED Tj and time

Specifications

Measuring parameters	<ol style="list-style-type: none"> 1. Junction temperature (Tj) 2. Case temperature (Tc) 3. Ambient temperature (Ta) 4. Heating voltage (Vh) 5. Heating current (Ih) 6. Power (Qin) 7. Temperature calibration current (Im) 8. Forward voltage (Vf) 9. Thermal resistance (Rjc) 10. Thermal resistance (Rja)
Tc measurement	1 set of T-type sensor, with digit display and RS-485 interface
Temp. calibration Current	0 ~ 1.999 mA; Resolution: ± 1 μA
Forward voltage	0 ~ 4.999V
Heating power	30V / 3A by a DC power supply
Heating voltage and current	with digit display and RS-485 interface
Data acquisition	DAQ 200 kHz; PC system is excluded
Data output of DAQ	Excel files
Dimension of 9383	36(W)×40(D)×16(H) cm
Power source of 9383	AC110~220V, 5A, single phase
Temp. range of 9022S	Δt = 55 ; Max. temperature < 80
Chamber Dimension	50 (W) × 50 (D) × 62 (H) cm
Overall dimension of 9022S	85 (W) × 65 (L) × 110 (H) cm
Power source of 9022S	AC220V, 15A, single phase