Orb Optronix, Inc.
1003 7th Ave, Suite B
Kirkland, WA 98033
tel: 425 605 8500
fax: 801 912 2645

Prepared By: AM
INITIALS ONLY

Device Ref #: TEST-White-LED-AL7-609
Date Issued: 08/24/2009
Date Tested: 10/01/09 15:19:13.492

CUSTOMER INFORMATION:

Prepared for: Orb Optronix
1003 7th Ave, Suite B
Kirkland, Washington

Evaluation For: LED-AL7-609
Type: Surface Mount

Job Number: ORB001
Test Report: MIS2100-L
Contact: Rob Leonard
E-mail: Leonard@OrbOptronix.com
Phone: 425 605 8500
Fax: 801 912 2645

NOTES: MIS2100 - ETΦ™ (Electrical-Thermal-Optical) LED characterization at up to 20 currents while holding the case temperature of the LED at up to 8 fixed temperatures, using an Orb Optronix ETΦ LED characterization system. The ETΦ is calibrated to this LED package using a NIST traceable spectral radiant flux standard.

Figure 1: 6" ETΦ™ LED Characterization System

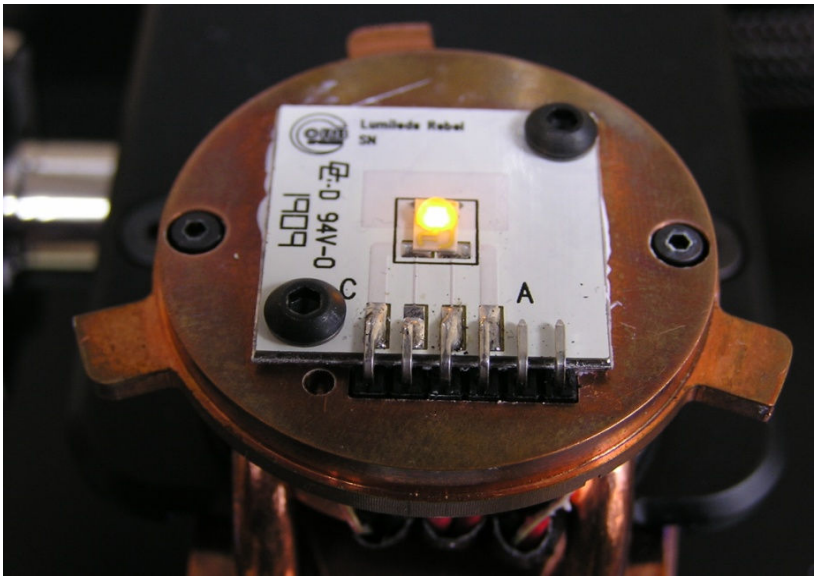

Figure 2: Device Mounted to Test Apparatus

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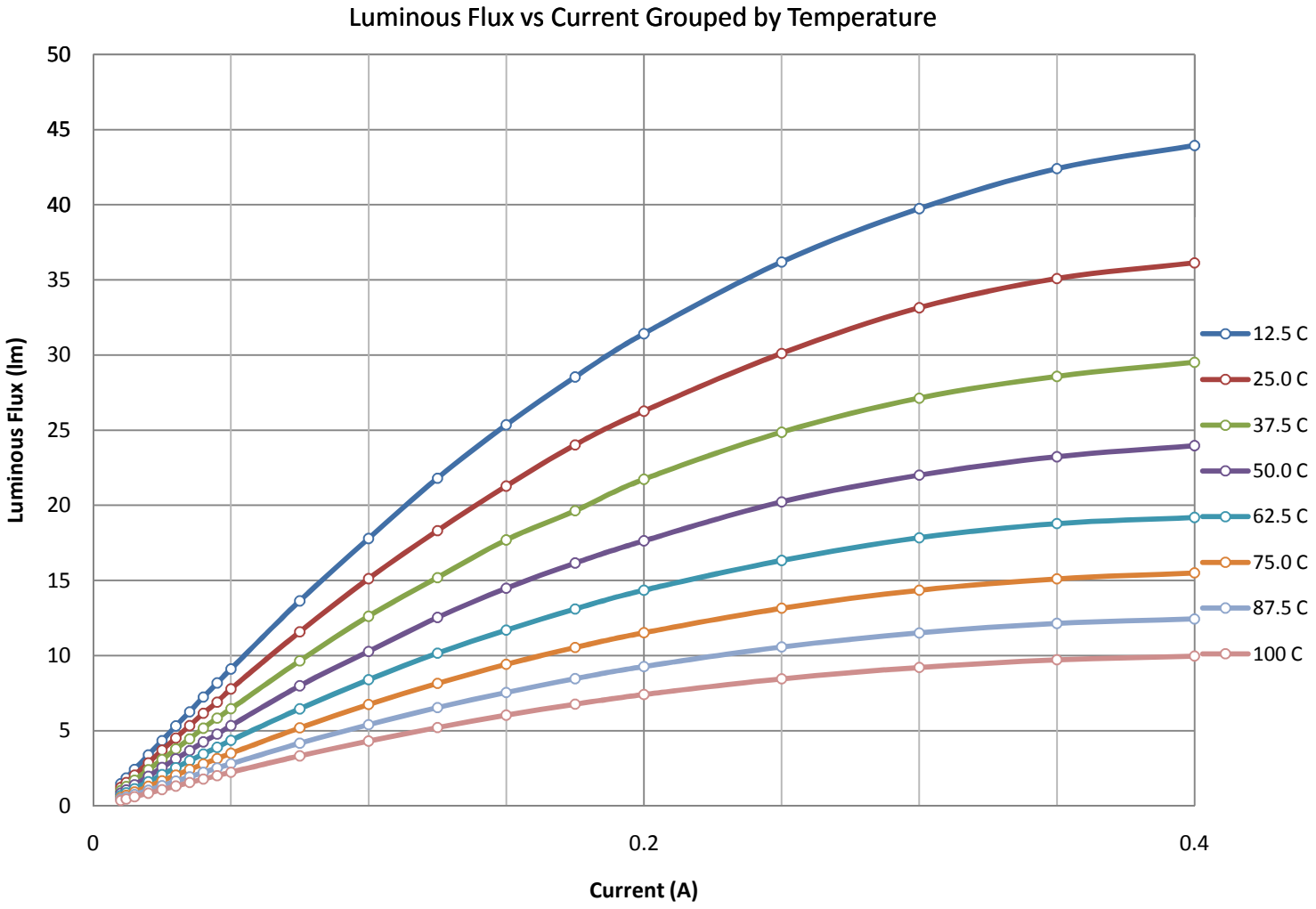
TEST SUMMARY					
Highest Luminous Flux (lm)	**43.94728173**	**lm**	Current Minimum	**0.04999804**	**A**
Highest Radiant Flux (W)	**0.090373839**	**W**	Current Maximum	**1.049837**	**A**
Average Cx	**0.5839**		Forward Voltage Minimum	**2.188041**	**V**
Average Cy	**0.5839**		Forward Voltage Maximum	**4.888846**	**V**
Average u′	**0.3425**				
Average v′	**0.5486**		Highest Power (electrical)	**5.132491418**	**W**
Average CCT	**NA**		Lowest Temperature	**9.9**	**˚C**
Average Dominant Wavelength	**611.4666667**	**nm**	Highest Temperature	**50.1**	**˚C**
Peak Color Purity by Percentage	**73%**		Maximum Luminous Efficacy	**83.26169679**	**lm/W**



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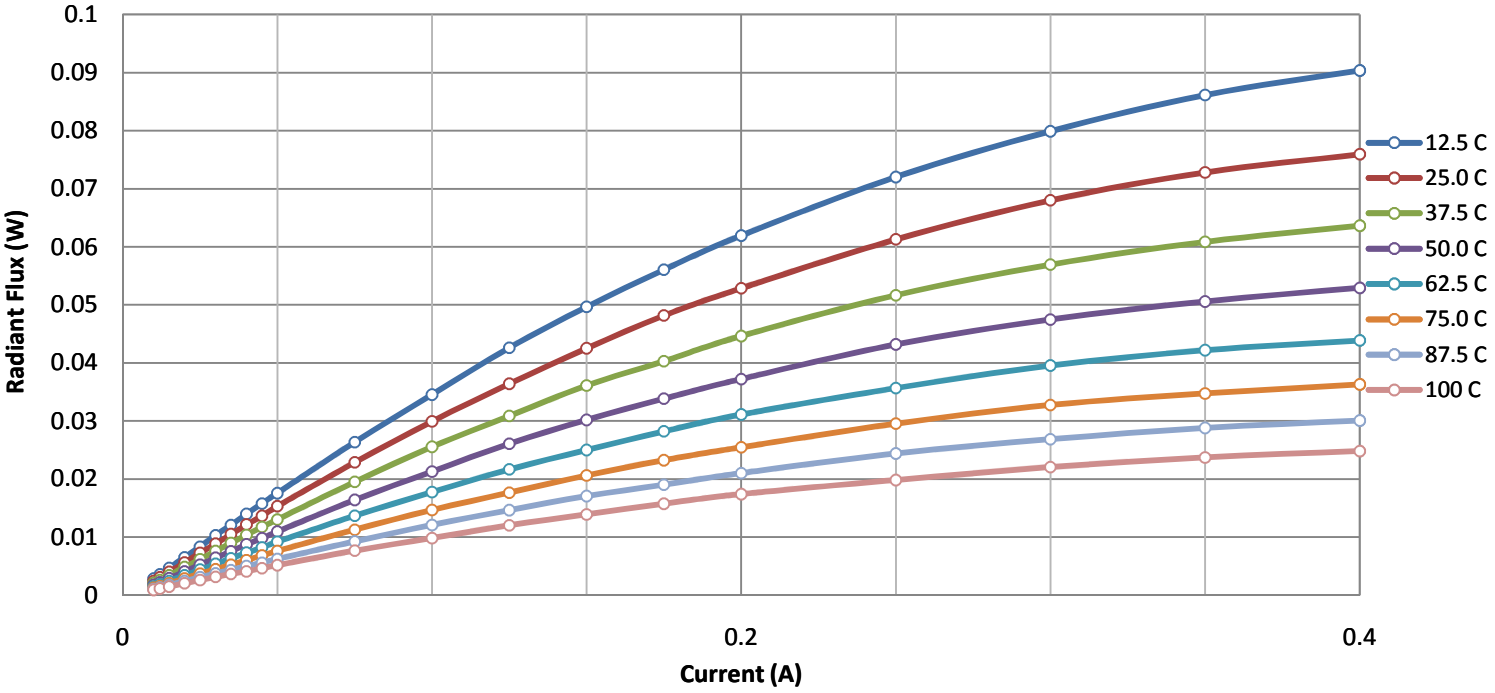
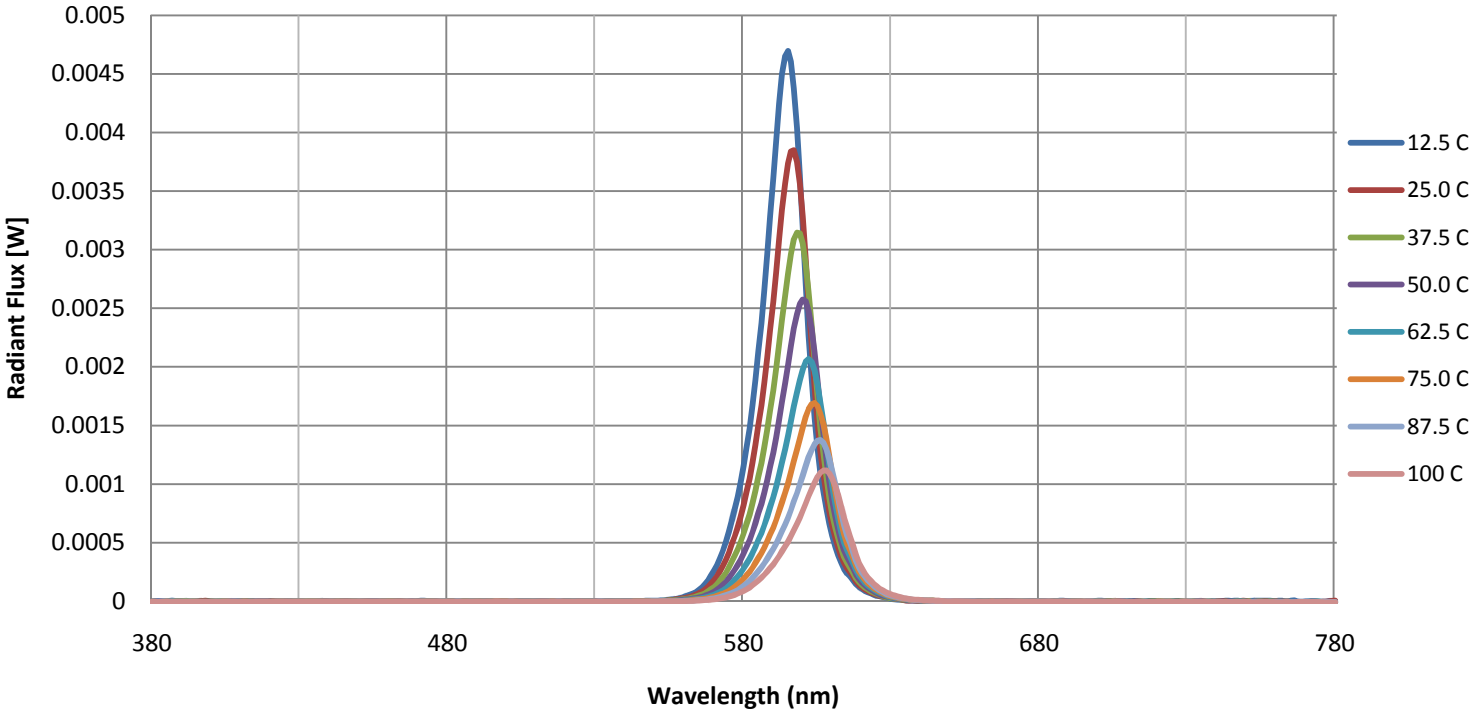
Radiant Flux vs Current Grouped by Temperature



Spectral Radiant Flux (W/nm) at Max Current Grouped by Temperature



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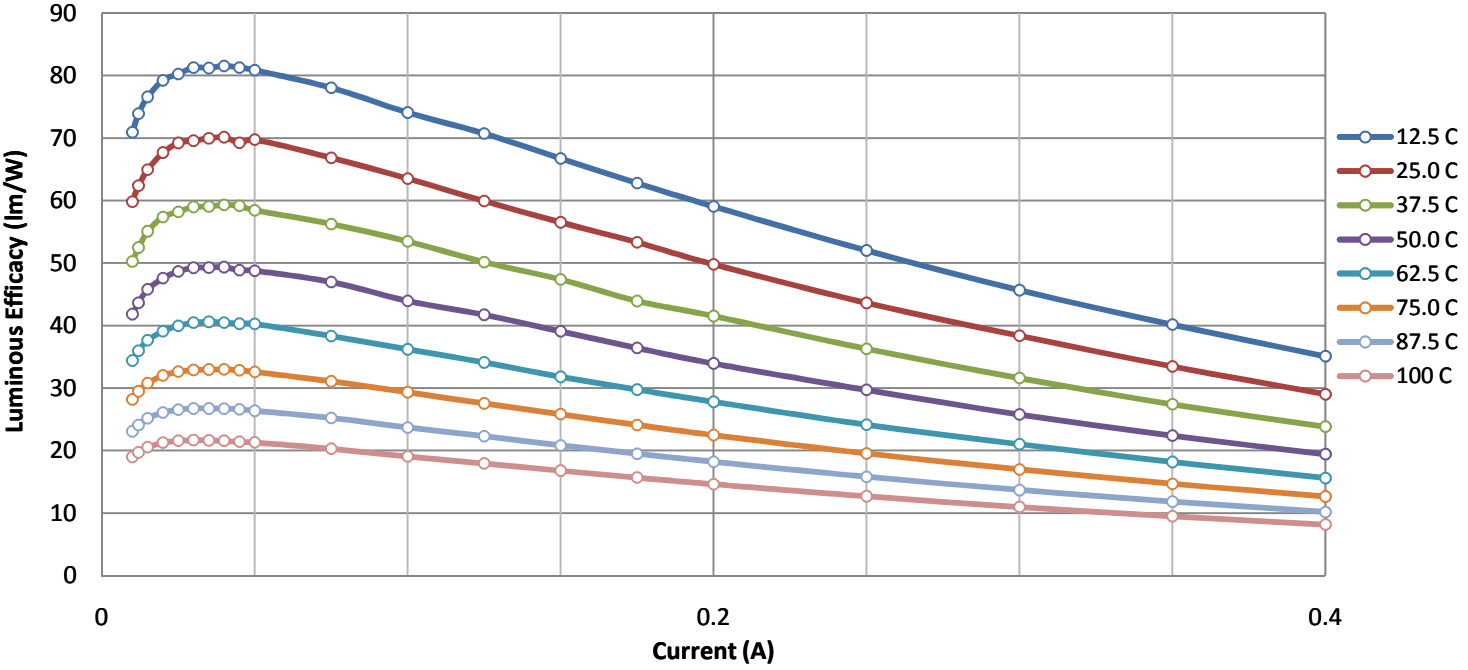
Luminous Efficacy vs Current Grouped by Temperature



Current vs Voltage Grouped by Temperature