

Samsung Electronics
LED Components

IES LM-80 Test Results



IES LM-80 Test Results

Table of Contents

Middle Power LED

• LM231A	-----	3
• LM231B	-----	4
• LM362A	-----	5
• LM561B	-----	6

High Power LED

• LH351A	-----	7
• LH351B	-----	8
• LH351Z	-----	9
• LH351Y	-----	10

COB LED

• LCxxxB Series	-----	11
-----------------	-------	----

IES LM-80 Test Results

LM231A

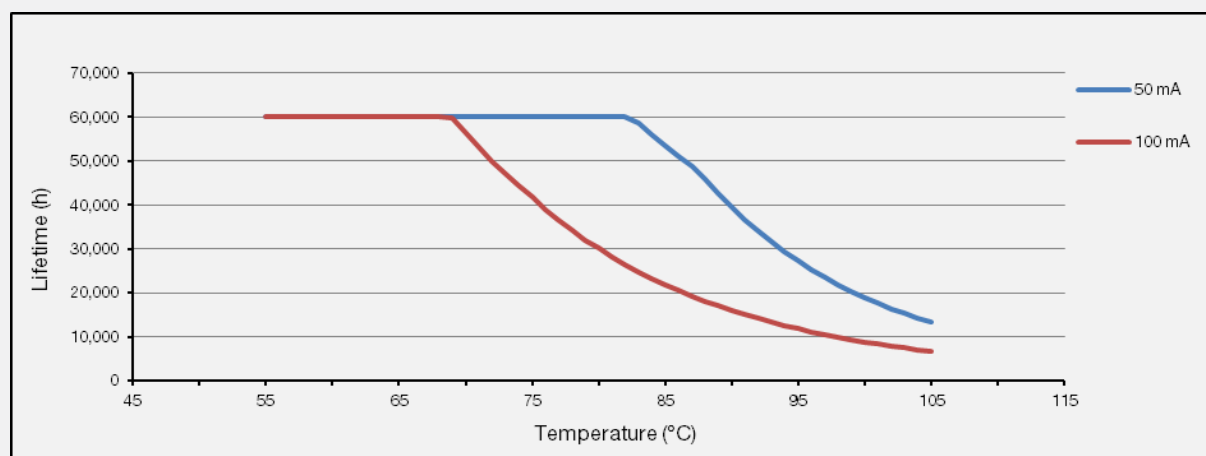
- Report date: 2012.03.26
- Applicable order codes: SPMWHT221*****

Test Summary

- Sample size: 26 pcs
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T _s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
50	55	10,000	98.7 %	> 60,000	> 60,000	> 60,000
	85		94.2 %	= 54,000	= 34,000	= 17,000
	105		78.7 %	= 14,000	= 10,000	= 6,000
100	55	10,000	98.2 %	> 60,000	> 60,000	= 50,000
	85		85.6 %	= 22,000	= 14,000	= 7,000
	105		66.5 %	= 9,000	= 6,000	= 4,000

L₇₀ Temperature Interpolation Graph



IES LM-80 Test Results

LM231B

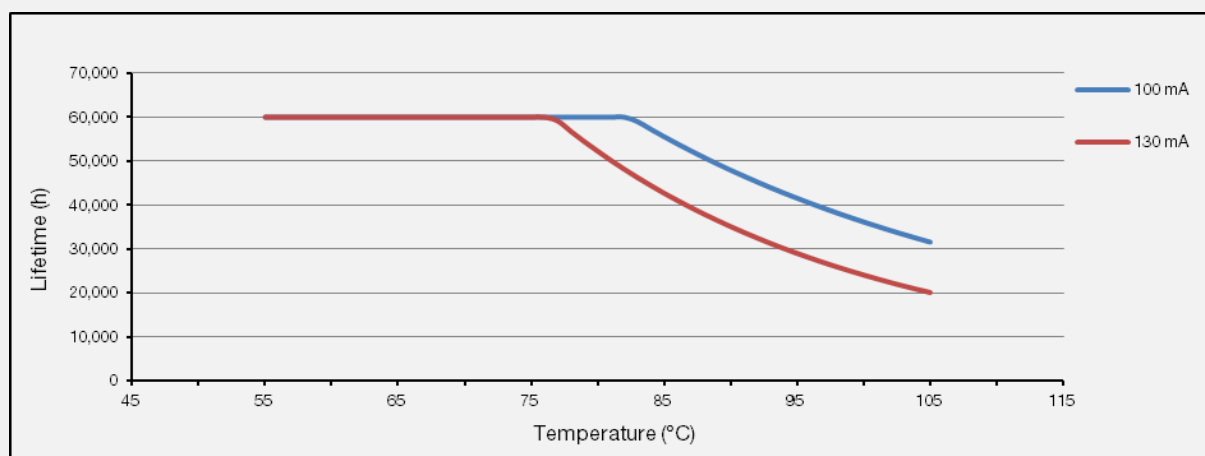
- Report date: 2014.07.25
- Applicable order codes: SPMWHT223*****

Test Summary

- Sample size: 28 pcs
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T _s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
100	55	10,000	98.2 %	> 60,000	> 60,000	= 48,000
	85		95.1 %	= 56,000	= 36,000	= 18,000
	105		91.3 %	= 34,000	= 22,000	= 11,000
130	55	10,000	98.5 %	> 60,000	> 60,000	= 46,000
	85		93.6 %	= 42,000	= 28,000	= 15,000
	105		87.6 %	= 21,000	= 14,000	= 8,000

L₇₀ Temperature Interpolation Graph



IES LM-80 Test Results

LM362A

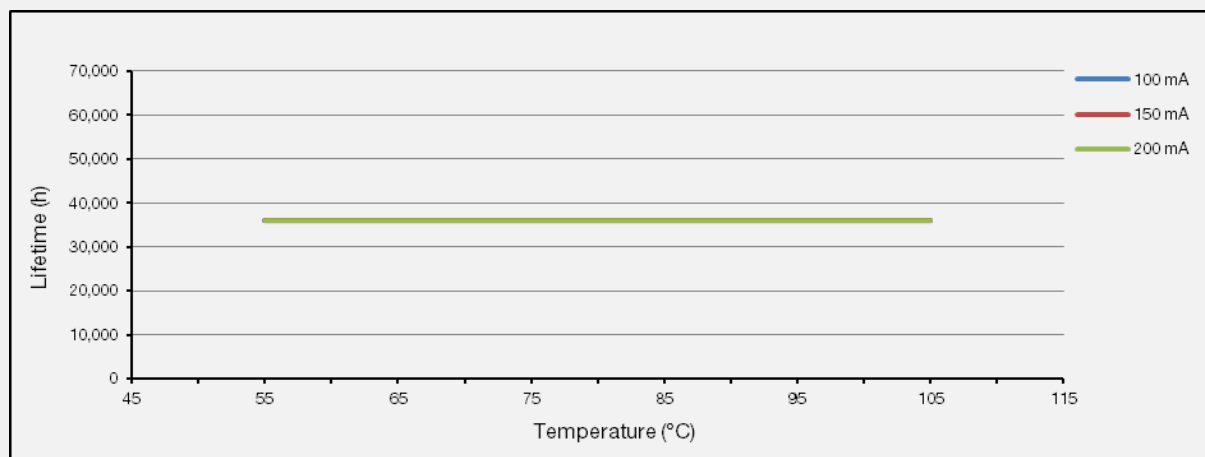
- Report date: 2013.05.08
- Applicable order codes: SPMWHT352A*****

Test Summary

- Sample size: 25 pcs
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T _s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
100	55	6,000	99.0 %	> 36,000	> 36,000	> 36,000
	85		97.4 %	> 36,000	> 36,000	= 19,000
	105		95.5 %	> 36,000	= 28,000	= 14,000
150	55	6,000	98.5 %	> 36,000	> 36,000	> 36,000
	85		97.0 %	> 36,000	> 36,000	= 18,000
	105		95.2 %	> 36,000	= 28,000	= 13,000
200	55	6,000	97.5 %	> 36,000	> 36,000	= 28,000
	85		96.6 %	> 36,000	> 36,000	= 20,000
	105		94.0 %	= 36,000	= 22,000	= 11,000

L₇₀ Temperature Interpolation Graph



IES LM-80 Test Results

LM561B

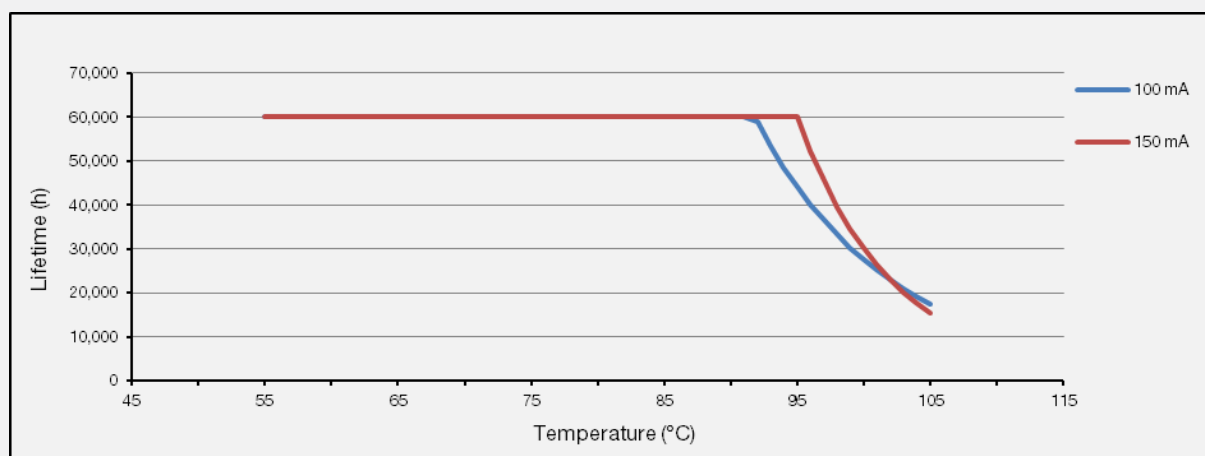
- Report date: 2014.04.29
- Applicable order codes: SPMWHT541M*****

Test Summary

- Sample size: 30 pcs
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T _s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
100	55	10,000	97.4 %	> 60,000	> 60,000	> 60,000
	85		96.2 %	> 60,000	> 60,000	= 29,000
	105		86.7 %	= 19,000	= 13,000	= 8,000
150	55	10,000	96.5 %	> 60,000	= 54,000	= 26,000
	85		96.7 %	> 60,000	> 60,000	= 55,000
	105		85.2 %	= 18,000	= 12,000	= 8,000

L₇₀ Temperature Interpolation Graph



IES LM-80 Test Results

LH351A

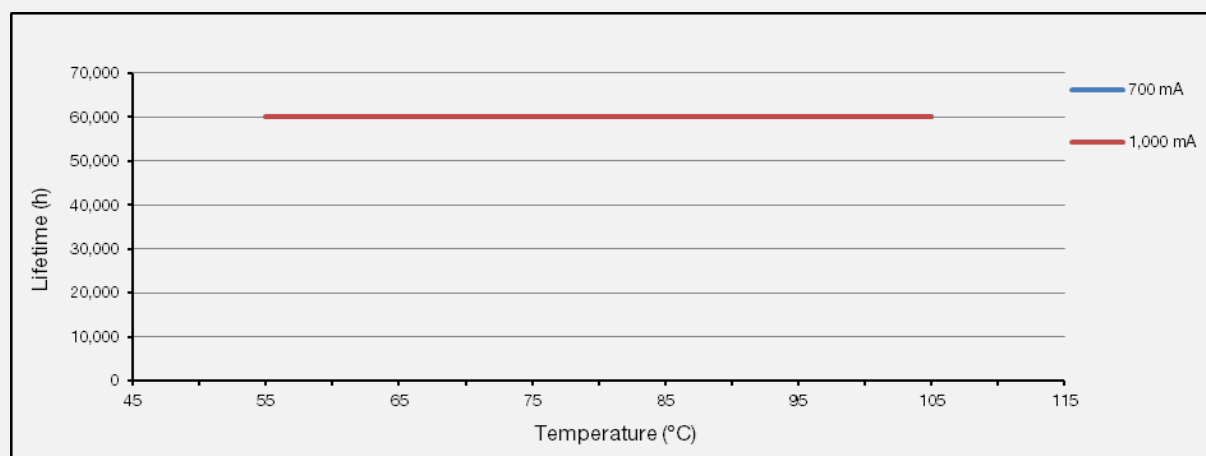
- Report date: 2013.07.24
- Applicable order codes: SPHWHTL3D3*****

Test Summary

- Sample size: 28 pcs
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T _s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
700	55	10,000	98.7 %	> 60,000	> 60,000	> 60,000
	85		98.5 %	> 60,000	> 60,000	> 60,000
	105		98.2 %	> 60,000	> 60,000	= 48,000
1,000	55	10,000	97.6 %	> 60,000	> 60,000	> 60,000
	85		97.3 %	> 60,000	> 60,000	= 51,000
	105		96.7 %	> 60,000	> 60,000	= 46,000

L₇₀ Temperature Interpolation Graph



IES LM-80 Test Results

LH351B

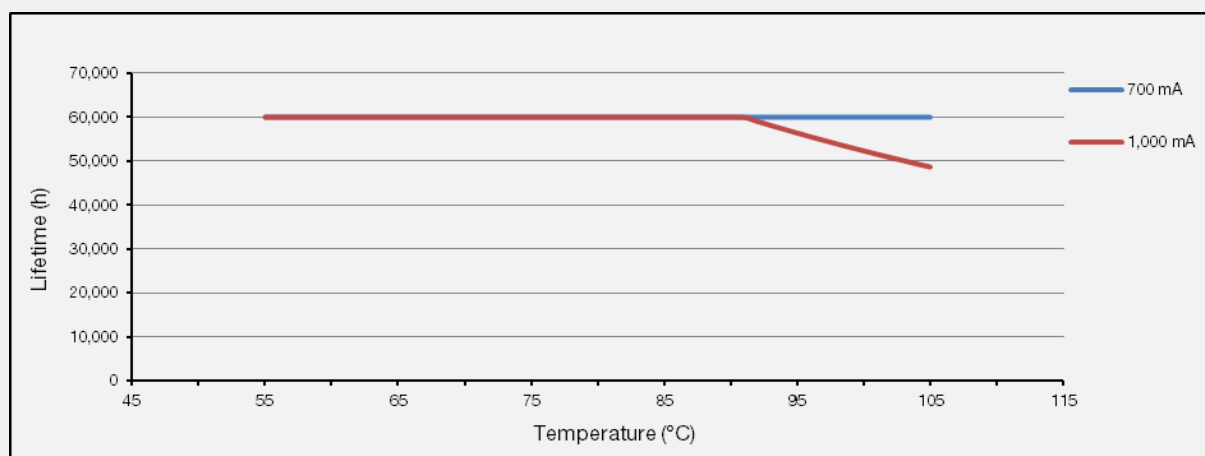
- Report date: 2014.09.30
- Applicable order codes: SPHWH1L3D3*****
SPHWH2L3D3*****
SPHWH3L3D3*****

Test Summary

- Sample size: 25 pcs
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T _s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
700	55	10,000	99.4 %	> 60,000	> 60,000	= 45,000
	85		96.8 %	> 60,000	> 60,000	= 38,000
	105		94.0 %	> 60,000	= 58,000	= 23,000
1,000	55	10,000	96.2 %	> 60,000	> 60,000	= 36,000
	85		93.5 %	> 60,000	= 40,000	= 18,000
	105		91.8 %	= 51,000	= 31,000	= 13,000

L₇₀ Temperature Interpolation Graph



IES LM-80 Test Results

LH351Z

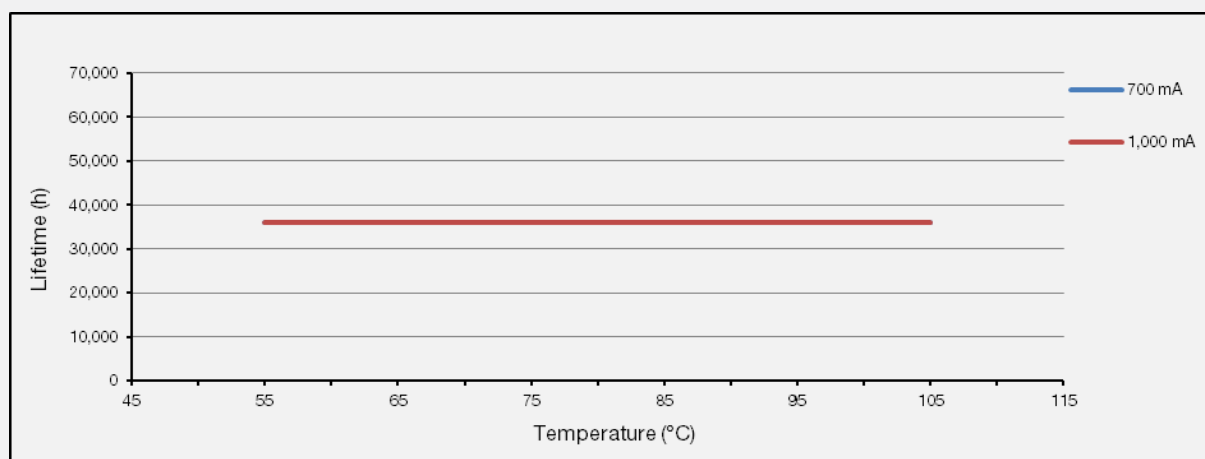
- Report date: 2014.06.17
- Applicable order codes: SPHWHTL3D2*****

Test Summary

- Sample size: 30 pcs (700 mA), 25 pcs (1,000 mA)
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T _s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
700	55	6,000	99.7 %	> 36,000	> 36,000	> 36,000
	85		98.6 %	> 36,000	> 36,000	> 36,000
	105		97.1 %	> 36,000	> 36,000	= 29,000
1,000	55	6,000	99.3 %	> 36,000	> 36,000	> 36,000
	85		99.4 %	> 36,000	> 36,000	> 36,000
	105		98.6 %	> 36,000	> 36,000	> 36,000

L₇₀ Temperature Interpolation Graph



IES LM-80 Test Results

LH351Y

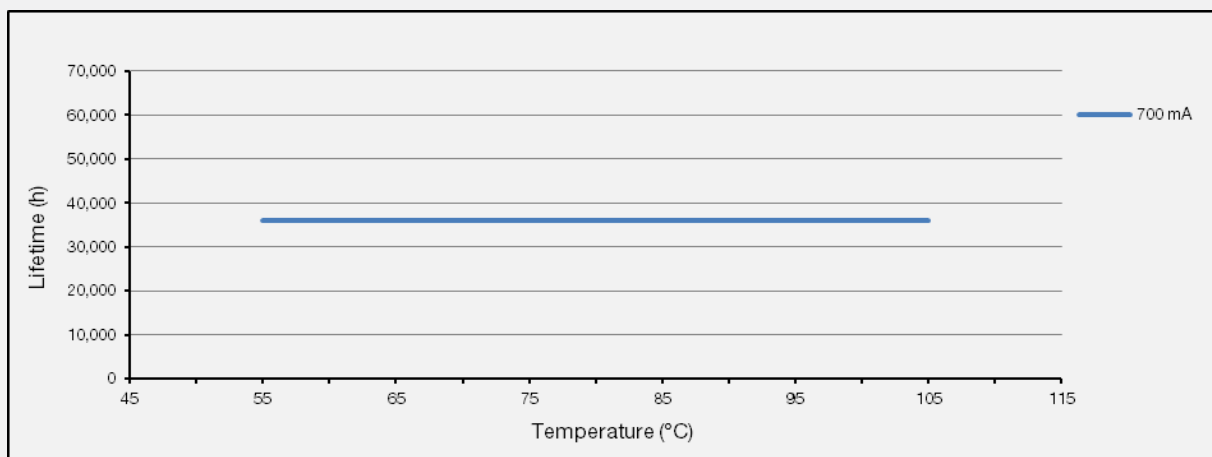
- Report date: 2013.10.31
- Applicable order codes: SPHWHTL3D2*****

Test Summary

- Sample size: 30 pcs
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T_s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
700	55	6,000	99.7 %	> 36,000	> 60,000	> 36,000
	85		98.6 %	> 36,000	> 36,000	> 36,000
	105		97.1 %	> 36,000	> 36,000	= 29,000

L₇₀ Temperature Interpolation Graph



IES LM-80 Test Results

LCxxxB Series

- Report date: 2014.01.20 (@ sorting current); 2014.11.24 (@ sorting current x 1.5)
- Applicable order codes:

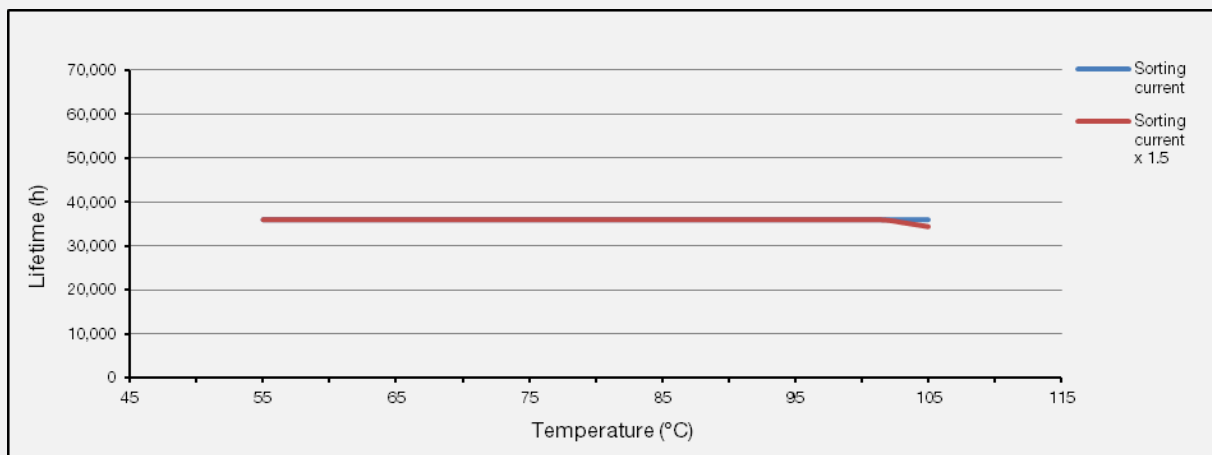
SPH*W1HDNE*****	LC040B	@ 1,080 mA (s.c.)	and	1,620 mA (s.c. x 1.5)
SPH*W1HDND*****	LC033B	900 mA		1,350 mA
SPH*W1HDNC*****	LC026B	720 mA		1,080 mA
SPH*W1HDNB*****	LC019B	540 mA		810 mA
SPH*W1HDNA*****	LC013B	360 mA		540 mA
SPH*W1HDN9*****	LC008B	240 mA		360 mA
SPH*W1HDN8*****	LC006B	180 mA		270 mA

Test Summary

- Test product: LC040B
- Sample size: 20 pcs
- Number of failures: 0 pcs

Drive Current (mA)	Temperature T _s (°C)	Test Duration (h)	Test Result Lumen Maintenance	Reported IES TM-21-11 Lifetime (h)		
				L ₇₀	L ₈₀	L ₉₀
Sorting Current	55	6,000	100.1 %	> 36,000	> 36,000	> 36,000
	85		98.5 %	> 36,000	> 36,000	= 23,000
	105		96.9 %	> 36,000	= 31,000	= 16,000
Sorting Current x 1.5	55	6,000	97.0%	> 36,000	> 36,000	= 23,000
	105		93.0%	= 34,000	= 21,000	= 9,000

L₇₀ Temperature Interpolation Graph



Legal and additional information.

[About Samsung Electronics Co., Ltd.](#)

Samsung Electronics Co., Ltd. is a global leader in technology, opening new possibilities for people everywhere. Through relentless innovation and discovery, we are transforming the worlds of TVs, smartphones, tablets, PCs, cameras, home appliances, printers, LTE systems, medical devices, semiconductors and LED solutions. We employ 286,000 people across 80 countries with annual sales of US\$216.7 billion. To discover more, please visit www.samsungled.com.

Copyright © 2014 Samsung Electronics Co., Ltd. All rights reserved.
Samsung is a registered trademark of Samsung Electronics Co., Ltd.
Specifications and designs are subject to change without notice. Non-metric weights and measurements are approximate. All data were deemed correct at time of creation. Samsung is not liable for errors or omissions. All brand, product, service names and logos are trademarks and/or registered trademarks of their respective owners and are hereby recognized and acknowledged.

Samsung Electronics Co., Ltd.
95, Samsung 2-ro
Giheung-gu
Yongin-si, Gyeonggi-do, 446-711
KOREA

www.samsungled.com

