BROADCOM®

Reliability Data Sheet

HL3P-51C0/52C0/61C0/62C0

3-mm Round 3-Leads Bicolor LED Lamp

Description

Broadcom tests parts at the absolute maximum rated conditions recommended for the device. The actual performance that you obtain from Broadcom® parts depends on the electrical and environmental characteristics of your application, but will probably be better than the performance outlined in the following table.

Table 1: Reliability Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
High Temperature Operating Life	JESD22-A108	T_A = 55°C for 500 hours (all chips on) I_F = 18 mA	56	0
Low Temperature Operating Life	JESD22-A108	T_A = –40°C for 500 hours (all chips on) I_F = 25 mA	56	0
Temperature Humidity Operating Life	JEITA ED- 4701/ 100 102	T_A = 60°C, 90% RH for 500 hours (all chips on) I_F = 16 mA for 500 hours	56	0
Temperature Cycle	JESD22-A104	–40°C/85°C, 15-minute dwell, 5-minute transfer, 100 cycles	336	0
High Temperature Storage Life	JESD22-A103	T_A = 85°C for 500 hours	56	0
Low Temperature Storage Life	JESD22-A119	T_A = –40°C for 500 hours	56	0
Temperature Humidity Storage Life	JEITA ED- 4701/ 100 103	T_A = 60°C, 90% RH for 500 hours	56	0
Pulse Test	JESD22-A108	T_A = 25°C, frequency = 1 kHz, peak current = 60 mA, duty factor = 10% for 500 hours (all chips on)	56	0
Solderability	J-STD-002	245°C for 5 seconds	28	0
Solder Heat Resistance	JESD22-B106	260 ±5°C for 10 ±5 seconds	28	0

NOTE: A failure is any LED that is open or shorted or that failed to emit light (except for the Solderability test).

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