

Moonstone 1W High Brightness Power LED Light Source

Reliability Data Sheet

Description

The following cumulative test results have been obtained from testing performed at Broadcom in accordance with JEDEC.

Broadcom tests parts at the absolute maximum rated conditions recommended for the device. The actual performance 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 Environmental Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
Temperature Cycle	Broadcom Req.	-40°C/120°C 30-min. dwell, 5 min. transfer, 100 cycles	500	0
High Temperature Operating Life	JESD22-A108	T _{hs} = 99°C, I _F = 500 mA, for 1000 hours	80	0
Low Temperature Operating Life	JESD22-A108	T _{hs} = -40°C, I _F = 500 mA for 1000 hours	80	0
Temperature Humidity Operating Life	JESD22-A101	T _A = 60°C, 90% RH, for 500 hours, I _F = 500 mA	80	0
Temperature Humidity Storage Life	Broadcom Req.	T _A = 60°C, 90% RH, for 1000 hours	80	0
High Temperature Storage Life	JESD 22-A103	T _A = 125°C, for 1000 hours	80	0
Low Temperature Storage	JESD22-A119	T _A = -40°C	80	0
Solderability	JESD 22-B102	245°C for 5s	30	0
Mechanical Shock	JESD22-B104	5 shocks each X1, X2, Y1, Y2, Z1, Z2, 1500G, 0.5-ms pulse	30	0
Vibration	JESD22-B103	4 cycles, 4mins each X, Y and Z at 0.06inch @ 20Hz-100Hz, 50g @ 100Hz-2000Hz	30	0

NOTE A failure is any LED that is open, shorted or fails to emit light (except solderability test).

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