

ASMT-Ax3x

3W Power LED Light Source

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 table.

Table 1: Reliability Tests

Test Name	Reference	Test Conditions	Units Tested	Units Failed
High Temperature Operating Life	JESD22-A108	$I_F = 700 \text{ mA}$ for 1000 hours InGaN: $T_s = 95^\circ\text{C}$ AlInGaP: $T_{hs} = 100^\circ\text{C}$	80	0
Temperature Humidity Operating Life	JEITA ED- 4701/ 100 102	$T_A = 60^\circ\text{C}$, 90% RH, $I_F = 700 \text{ mA}$ for 500 hours	80	0
Temperature Cycle	JESD22-A104	$-40^\circ\text{C}/120^\circ\text{C}$, 30-minute dwell, 5-minute transfer, 100 cycles	336	0
High Temperature Storage Life	JESD22-A103	$T_A = 125^\circ\text{C}$ for 1000 hours	56	0
Low Temperature Storage	JESD22-A119	$T_A = -40^\circ\text{C}$ for 1000 hours	56	0
Temperature Humidity Storage Life	JEITA ED- 4701/ 100 103	$T_A = 60^\circ\text{C}$, 90% RH for 1000 hours	56	0
Pulse Test	JESD22-A108	$T_{hs} = 25^\circ\text{C}$, duty factor = 10%, $I_F = 1.5\text{A}$, frequency = 1 kHz, 1000 hours	56	0
Resistance to Soldering Heat	JESD22-B106	$260^\circ\text{C} \pm 5^\circ\text{C}$ for 10 seconds ± 5 seconds	28	0
Solderability	J-STD-002	245°C for 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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