

ASMT-YTB7, ASMT-YTC7, ASMT-YTD7

High-Brightness Tricolor PLCC-6 Surface-Mount LED

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	$T_A = 85^{\circ}\text{C}$ (3 chips on) AlInGaP: $I_F = 17\text{ mA}$ for 1000 hours InGaN: $I_F = 10\text{ mA}$ for 1000 hours	56	0
Low Temperature Operating Life	JESD22-A108	$T_A = -40^{\circ}\text{C}$ (3 chips on) AlInGaP: $I_F = 50\text{ mA}$ for 1000 hours InGaN: $I_F = 25\text{ mA}$ for 1000 hours	56	0
Temperature Humidity Operating Life	JEITA ED-4701/100 102	$T_A = 60^{\circ}\text{C}$, 90% RH (3 chips on) AlInGaP: $I_F = 33\text{ mA}$ for 500 hours InGaN: $I_F = 20\text{ mA}$ for 500 hours	56	0
Temperature Cycle	JESD22-A104	$-40^{\circ}\text{C}/100^{\circ}\text{C}$, 30-minute dwell, 5-minute transfer, 100 cycles	336	0
High Temperature Storage Life	JESD22-A103	$T_A = 85^{\circ}\text{C}$ 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	$T_A = 25^{\circ}\text{C}$, Frequency = 1 kHz, Peak Current = 100 mA, Duty Factor = 10% for 1000 hours	56	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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