RELIABILITY TESTS





SMD LED Products

Test Item	Test Conditions	Description	Reference Standard
Continuous operating	Ta=25°C T=1000hrs	The purpose of this test is to determine the resistance of the device when operating under electrical stress	EIAJ ED-4701 100 101
	RH<75%RH, IF(Max)		
High temperature storage	Ta=100°C T=1000hrs	The purpose of this test is to evaluate the product durability after long-term storage in high temperature	EIAJ ED-4701 200 201
Low temperature storage	Ta=-40°C T=1000hrs	The purpose of this test is to evaluate the product durability after long-term storage in low temperature	EIAJ ED-4701 200 202
High temperature and humidity storage	Ta=60°C T=1000hrs	The purpose of this test is to evaluate product durability under long-term high temperature and high humidity storage	EIAJ ED-4701 100 103
	RH=90%RH		
High temperature and	Ta=60°C T=1000hrs	The purpose of this test is to determine the resistance of the device under electrical and thermal stress	EIAJ ED-4701 100 102
humidity operating	RH=90%RH, IF(Max)		
Solderability	Ta=245°C T=5sec	The purpose of this test is to evaluate solderability on leads of device	EIAJ ED-4701 300 303
Soldering resistance	Ta=260°C T=5sec	The purpose of this test is to determine the thermal resistance characteristics of the device to sudden exposures at extreme changes in temperature during Tin-dipping	EIAJ ED-4701 300 301
Temperature cycling	Ta=-40°C~25°C~100°C~25°C	The purpose of this test is to determine the resistance of the device to storage under extreme temperature for hours	EIAJ ED-4701 100 105
	T=(30min~5min~30min~5min)×10cycles		
Temperature cycling operating	Ta=-40°C~25°C~100°C~25°C IF(Max)	The purpose of this test is to determine the resistance of the	N/A
	T=(30min~5min~30min~5min)×10cycles	device under extreme temperature for hours	
Thermal shock	Ta=-40°C~100°C	The purpose of this test is to determine the resistance of the device to sudden extreme changes in high and low temperature	EIAJ ED-4701 300 307
	T=15min~15min×100cycles		

LED Displays

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High temperature storage	Ta=100°C T=1000hrs	The purpose of this test is to evaluate the product durability after long-term storage in high temperature	EIAJ ED-4701 200 201
Low temperature storage	Ta=-40°C T=1000hrs	The purpose of this test is to evaluate the product durability after long-term storage in low temperature	EIAJ ED-4701 200 202
High temperature and humidity storage	Ta=60°C T=1000hrs	The purpose of this test is to evaluate product durability under long-term high temperature and high humidity storage	EIAJ ED-4701 100 103
	RH=90%RH		
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Soldering resistance	Ta=260°C T=5sec	The purpose of this test is to determine the thermal resistance characteristics of the device to sudden exposures at extreme changes in temperature during Tin-dipping	EIAJ ED-4701 300 301
Temperature cycling	Ta=-40°C~25°C~100°C~25°C	The purpose of this test is to determine the resistance of the device to storage under extreme temperature for hours	EIAJ ED-4701 100 105
	T=(30min~5min~30min~5min)×10cycles		
Thermal shock	Ta=-40°C~100°C	The purpose of this test is to determine the resistance of the device to sudden extreme changes in high and low temperature	EIAJ ED-4701 300 307
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	RH=90%RH		
High temperature and humidity operating	Ta=60°C T=1000hrs	The purpose of this test is to determine the resistance of the device under electrical and thermal stress	EIAJ ED-4701 100 102
	RH=90%RH, IF(Max)		
Lead frame bending	Bend 90°C T=3 cycles	The purpose of this test is to evaluate products durability against mechanical stress applied to leads	N/A
Lead frame pulling	W=1kg T=30sec	The purpose of this test is to evaluate products durability against mechanical stress	N/A
Solderability	Ta=245°C T=5sec	The purpose of this test is to evaluate solderability on leads of device	EIAJ ED-4701 300 303
Soldering resistance	Ta=260°C T=5sec	The purpose of this test is to determine the thermal resistance characteristics of the device to sudden exposures at extreme changes in temperature during Tin-dipping	EIAJ ED-4701 300 302
Temperature cycling	Ta=-40°C~25°C~100°C~25°C	The purpose of this test is to determine the resistance of the device to storage under extreme temperature for hours	EIAJ ED-4701 100 105
	T=(30min~5min~30min~5min)×10cycles		
Temperature cycling operating	Ta=-40°C~25°C~100°C~25°C IF(Max)	The purpose of this test is to determine the resistance of the device under extreme temperature for hours	N/A
	T=(30min~5min~30min~5min)×10cycles		
Thermal shock	Ta=-40°C~100°C	The purpose of this test is to determine the resistance of the device to sudden extreme changes in high and low temperature	EIAJ ED-4701 300 307
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