

# Reliability Test

	Seoul	Bridgelux	CREE	OSRAM	LUMOSLED
S.No.	Test Item	Test Item	Test Item	Test Item	Test Item
1	External Visual				External Visual
2	D.P.A				
3	ESD	ESD	ESD	ESD	ESD
4	Physical Dimension				Physical Dimension
5	Parametric Verification				Parametric Verification
6	Temperature Cycling	Temperature Cycle	Temperature Cycle	Temperature Cycling	Temperature Cycling
7	Power Temperature Cycle	Power Switching		Power Temperature Cycle	Power Temperature Cycle
8	High Humidity High Temp. operating Life	Temperature Humidity Operating Life	High Temperature Life Test		High Humidity High Temp. operating Life
9	High Temperature Operating Life	High Temperature Operating Life			High Temperature Operating Life
10	Solder ability				Solder ability
11	Resistance to Solder Heat		Resistance to Solder Heat (Reflow Soldering)	Resistance to Soldering Heat	Resistance to Solder Heat
12	Thermal resistance	Thermal Shock	Thermal Shock		Thermal Resistance
13	Wire Bond Strength				Wire Bond Strength
14	Bond Shear				Bond Shear
15	Die Shear				Die Shear
					Wire Bond Integrity
		Moisture/ Reflow Sensitivity	Moisture Resistance		
		Low Temperature Storage	Low Temperature Life Test	Pulsed Life test	Low Temperature Storage
		High Temperature Storage	High Pressure Storage		High Temperature Storage
		Low Temperature Operating Life			
			Low Temperature Storage		
			Temperature Humidity Storage		
			Vibration-Variable frequency		
			High Humidity Heat Life Test		
			Life Test	Steady State Life Test	
			Water Proof Test		Water Proof Test
				Temperature & Humidity Bias	
	Total: 14 Tests from Seoul	Total: 10 Tests from Bridgelux	Total: 14 Tests from CREE	Total: 7 Tests from OSRAM	Total: 18 Tests from LUMOS