

Reliability Performance & Critique

Qualification Test of new PCB for C130 Top Surface Mount ChipLED (PCN : V13-003-48475413-0A)

Item	Test Type	Condition	SS	Test criteria	Test Result
1	High humidity high temperature storage life (WHTSL)	60'C/90%RH (ET @ 20mA)	168	a) No catastrophic failure and no parametric failure	Passed 500hrs
2	High temperature operating life test (HTOL)	85'C,5mA (ET @ 20mA)	168	b) Max Iv degradation < 50%	Passed 500hrs
				c) Vf shift < 5%	
3	Preconditioning → solder on board → temperature cycle (TMCL)	Preconditioning at 60'C/60%RH, 120 hours TMCL -40/85'C, 15 5 15 (ET @ 20mA)	168		Passed 100 cycles
4	Preconditioning → solder on board → temperature cycle (TMCL)	Preconditioning at 60'C/60%RH, 120 hours TMCL -40/85'C, 15 5 15 (Hot Light up test @ 100'C)	300	No open/short LEDs	Passed 100 cycles
5	Solderability Test	245'C, 5 sec	10	Solder coverage > 95% of critical surface area, no pinholes, voids, porosity	Passed