Agilent 0.69" 8x8 Mono and Bicolor (HER/Green) General Purpose Dot Matrix Displays

Reliability Data Sheet

HDSP-S80E/HDSP-S85E
HDSP-S80G/HDSP-S85G
HDSP-B80Z/HDSP-B85Z

Description

The following cumulative test results have been obtained from testing performed at Agilent Technologies Optoelectronics Division in accordance with the latest revision of MIL-STD-883.

The actual performance you obtain from Agilent parts depends on the electrical and environmental characteristics of your application but will probably be better than the performance outlined in Table 1.

Table 1. Life Tests
Demonstrated Performance

						Point Typical Performance	
Colors	**Stress Test**	**Stress Test Conditions**	**Total Device Hrs.**	**Units Tested**	**Units Failed**	**MTBF**	**Failure Rate (% /1K Hours)**
HER and Green	Low Temperature Operating Life	T_A = -40°C Avg. $I_{F, HER}$ = 8 mA Avg. $I_{F, Green}$ = 12.5 mA $I_{peak, HER}$ = 80 mA $I_{peak, Green}$ = 100 mA Cycle = 1/8 Duty Frequency = 1 kHz	10,000	20	0	10,000	< 10
HER and Green	High Temperature Operating Life	T_A = +55°C Avg. $I_{F, HER}$ = 8 mA Avg. $I_{F, Green}$ = 12.5 mA $I_{peak, HER}$ = 80 mA $I_{peak, Green}$ = 100 mA Cycle = 1/8 Duty Frequency = 1 kHz	10,000	20	0	10,000	< 10
HER and Green	Wet High Temperature Operating Life	T_A = +85°C RH = 85% Avg. $I_{F, HER}$ = 8 mA Avg. $I_{F, Green}$ = 12.5 mA $I_{peak, HER}$ = 80 mA $I_{peak, Green}$ = 100 mA Cycle = 1/8 Duty Frequency = 1 kHz	10,000	20	0	10,000	< 10

Table 1. Life Tests
Demonstrated Performance (continued)

						Point Typical Performance	
Colors	**Stress Test**	**Stress Test Conditions**	**Total Device Hrs.**	**Units Tested**	**Units Failed**	**MTBF**	**Failure Rate (% /1K Hours)**
HER and Green	Wet High Temperature Operating Life	T_A = +30°C RH = 60% Avg. $I_{F, HER}$ = 8 mA Avg. $I_{F, Green}$ = 12.5 mA $I_{peak, HER}$ = 80 mA $I_{peak, Green}$ = 100 mA Cycle = 1/8 Duty Frequency = 1 kHz	10,000	20	0	10,000	< 10

Table 2. Environmental Tests

Test Name	**Reference**	**Test Conditions**	**Units Tested**	**Units Failed**
Temperature Cycle	MIL-STD-883 Method 1010	-40°C to + 85°C, 15 min. dwell, 5 min. transfer, up to 50 cycles……	800	0
Solder Heat Resistance	Agilent reference	Solder temperature: 260 ±5°C for 5 ±1 sec, immersion depth 1.5 mm from case.	20	0
Solderability Test	MIL-STD-883 Method 2003	16 hours steam aging followed by solder dip at 260°C for 5 seconds.	10	0
Drop Test	Agilent reference	1.2 meter drop ceramic, concrete or steel surface for 10 repetitions.	10	0

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