

Device Modeling Report

COMPONENTS: Laser Diode
PART NUMBER: DL-4039-011
MANUFACTURER: SANYO

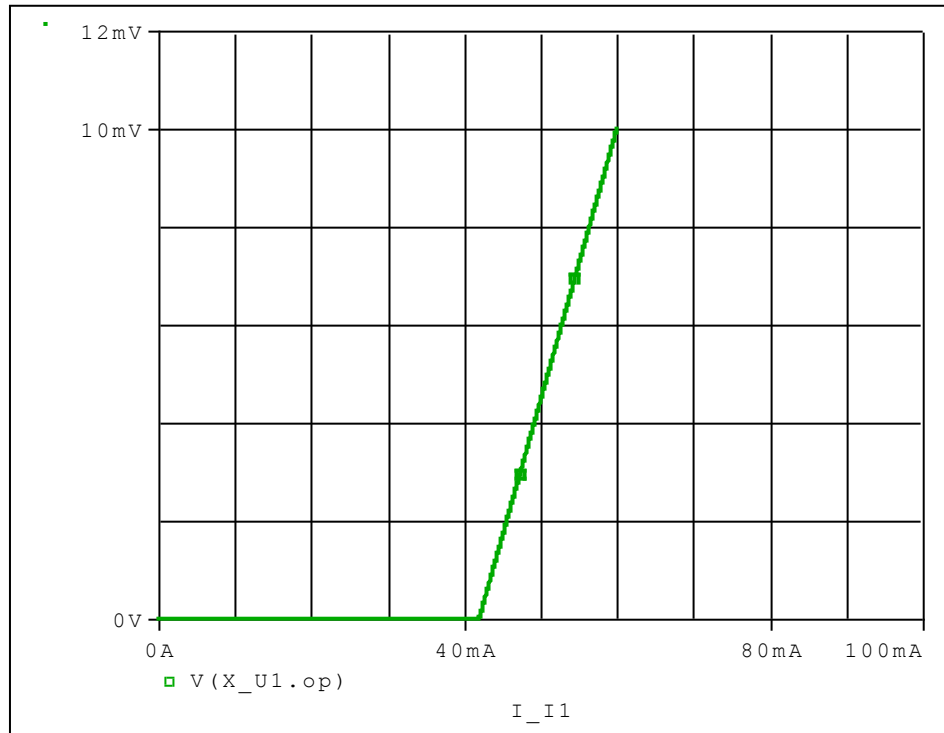


Bee Technologies Inc.

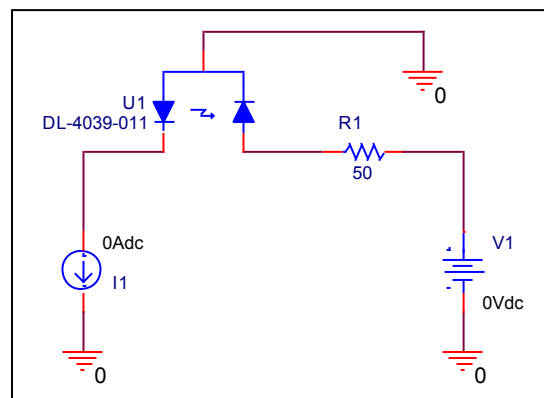
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a positive value)
IBV	Reverse Breakdown Current(a positive value)
TT	Transit Time

Optical Output Power vs. Forward current characteristics

Circuit simulation result

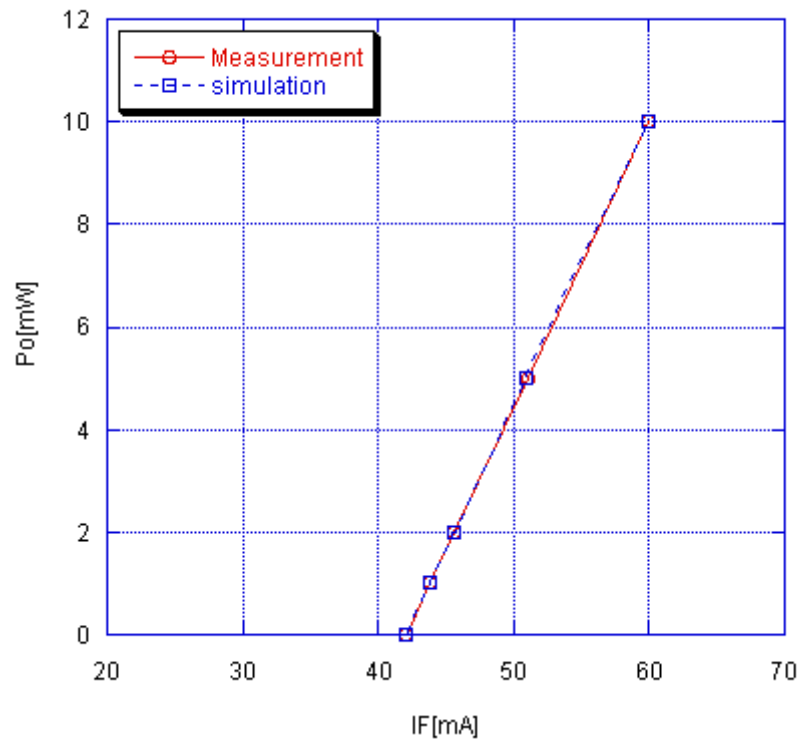


Evaluation circuit



Comparison graph

Circuit simulation result

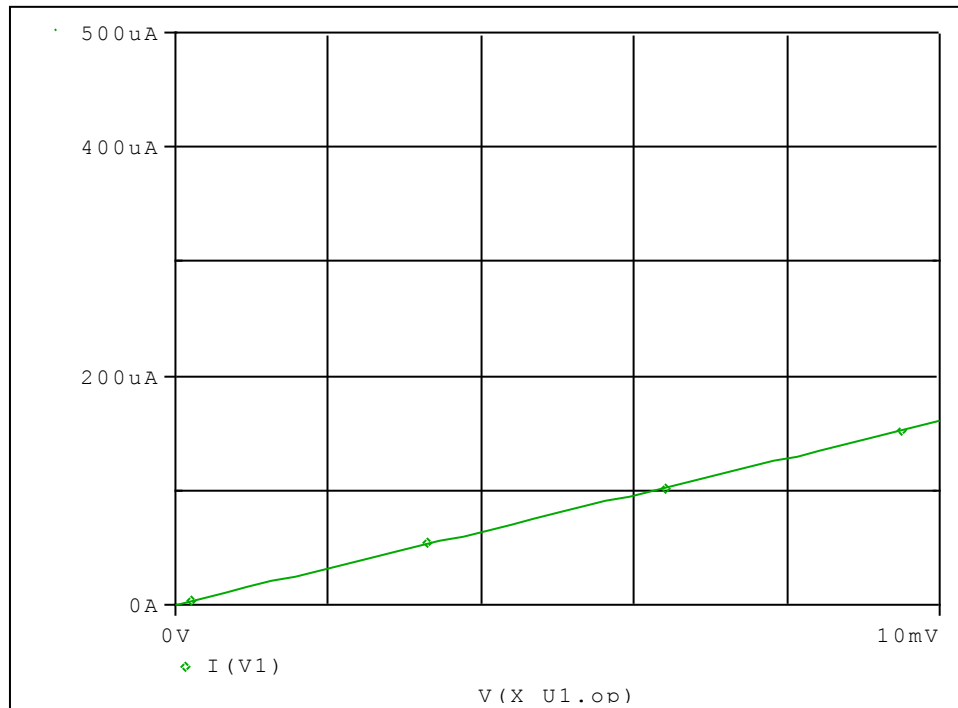


Simulation Result

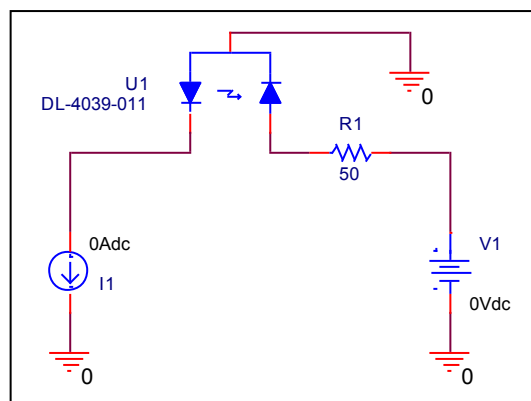
P_o [mW]	I_F [mA]		Error (%)
	Measurement	Simulation	
0.010	42.000	41.980	0.048
1.000	43.780	43.760	0.046
2.000	45.550	45.560	0.022
5.000	51.000	50.970	0.059
10.000	60.000	60.000	0.000

Monitor Current vs. Optical Output Power characteristics

Circuit simulation result

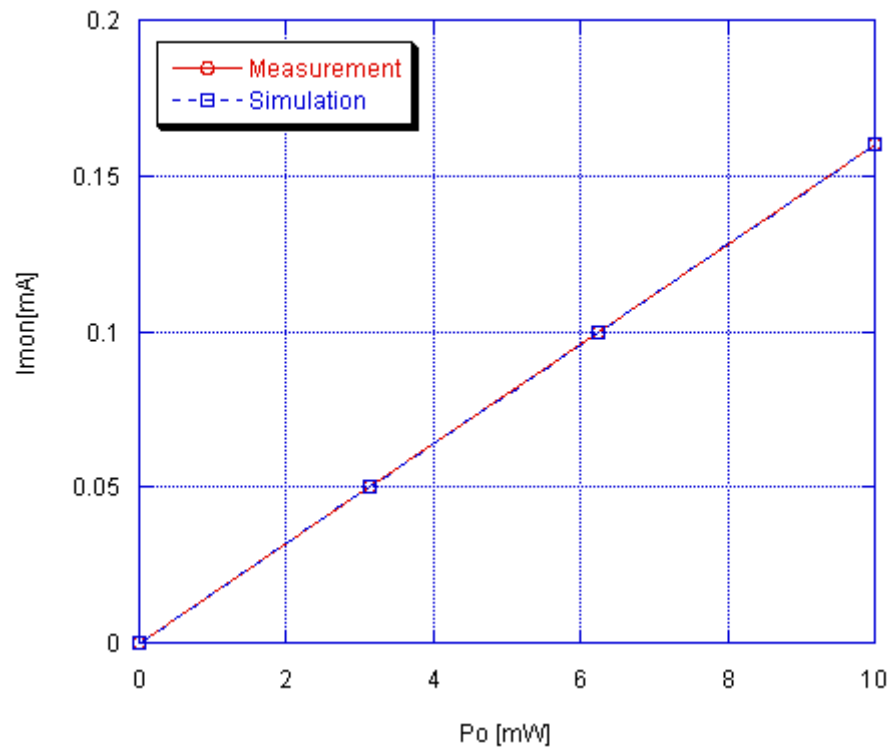


Evaluation circuit



Comparison graph

Circuit simulation result



Simulation Result

I _{mon} [mA]	P _o [mW]		Error (%)
	Measurement	Simulation	
0.050	3.125	3.125	0.000
0.100	6.250	6.250	0.000
0.160	10.000	10.000	0.000