

Device Modeling Report

COMPONENTS: GaAlAs Laser Diode
PART NUMBER: HL6738MG
MANUFACTURER: HITACHI

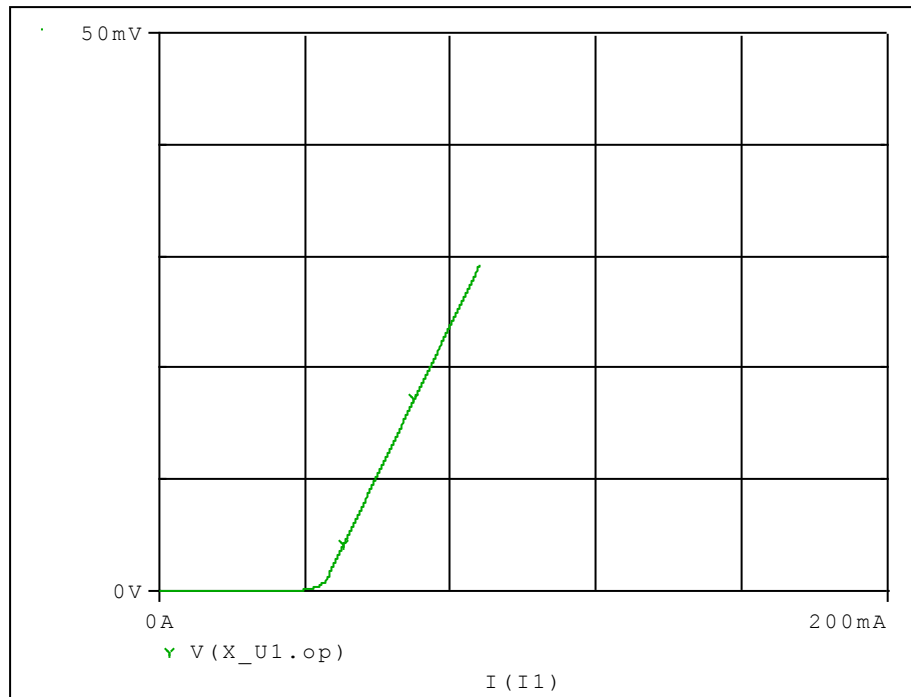


Bee Technologies Inc.

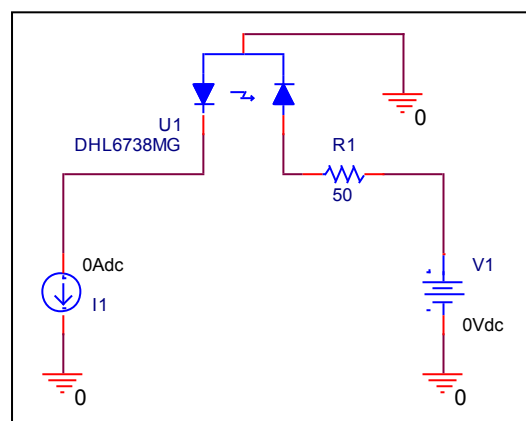
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Optical Output Power vs. Forward current characteristics

Circuit simulation result

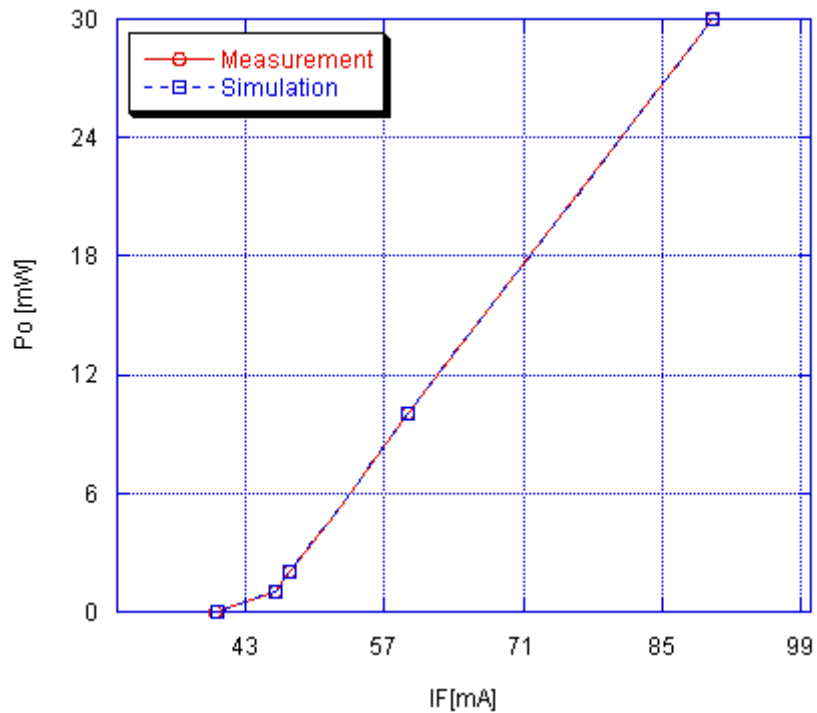


Evaluation circuit



Comparison graph

Circuit simulation result

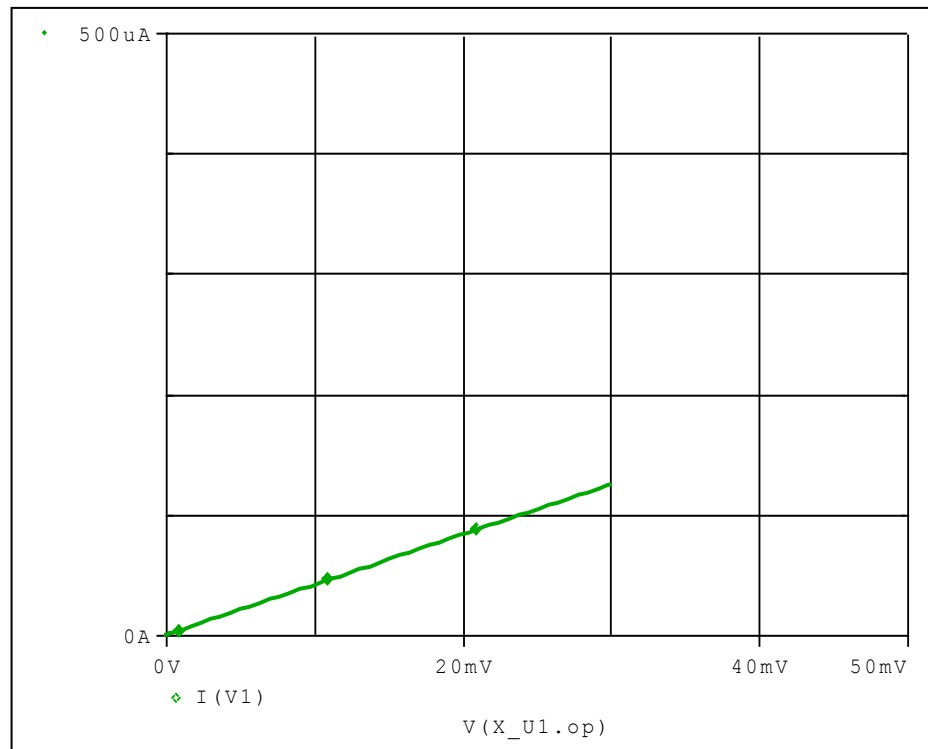


Simulation Result

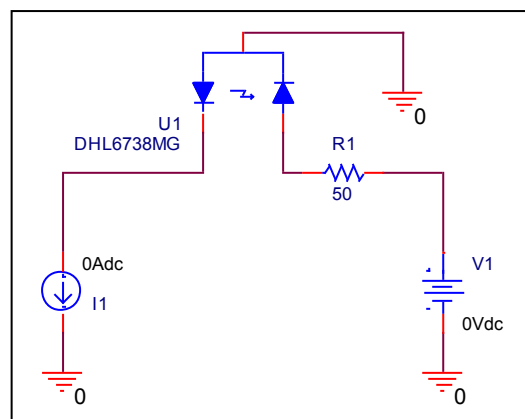
Po [mW]	IF[mA]		Error (%)
	Measurement	Simulation	
0.010	40.000	40.200	0.500
1.000	46.000	46.000	0.000
2.000	47.400	47.460	0.127
5.000	52.000	52.000	0.000
10.000	59.400	59.420	0.034
20.000	73.300	73.340	0.055
29.000	88.000	88.000	0.000

Monitor Current vs. Optical Output Power characteristics

Circuit simulation result

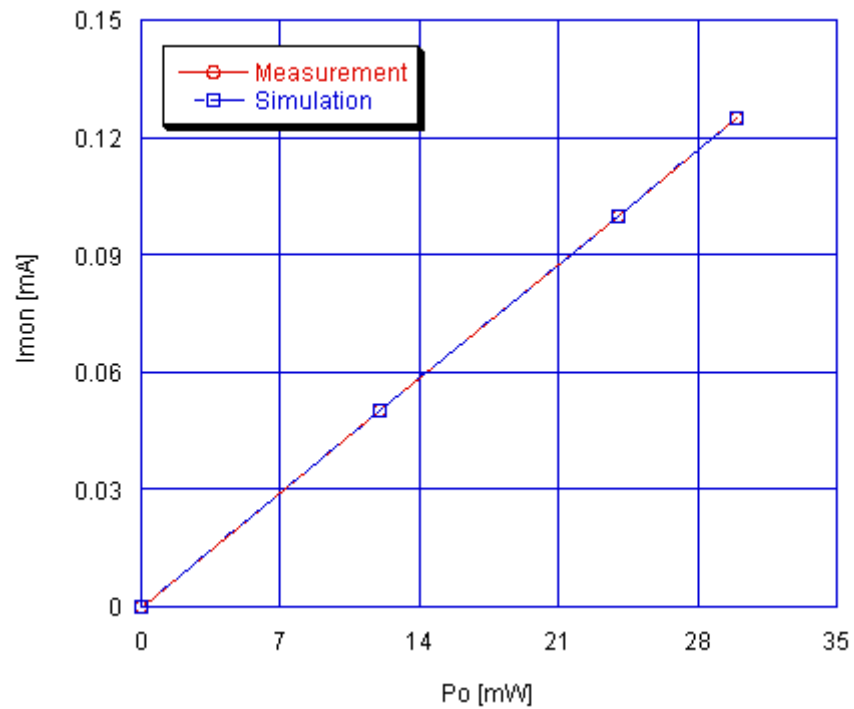


Evaluation circuit



Comparison graph

Circuit simulation result



Simulation Result

Imon [mA]	Po [mW]		Error (%)
	Measurement	Simulation	
0.050	12.000	11.970	0.250
0.100	24.000	24.000	0.000
0.125	30.000	30.000	0.000