Device Modeling Report

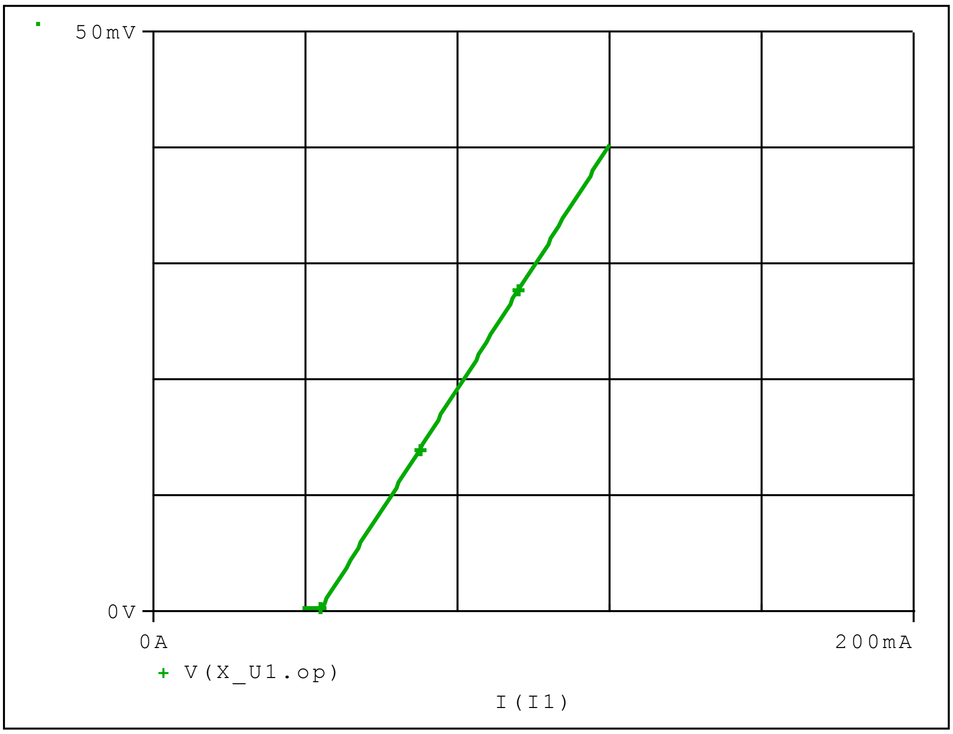
COMPONENTS: GaAlAs Laser Diode
PART NUMBER: HL8325G
MANUFACTURER: HITACHI

Bee Technologies Inc.

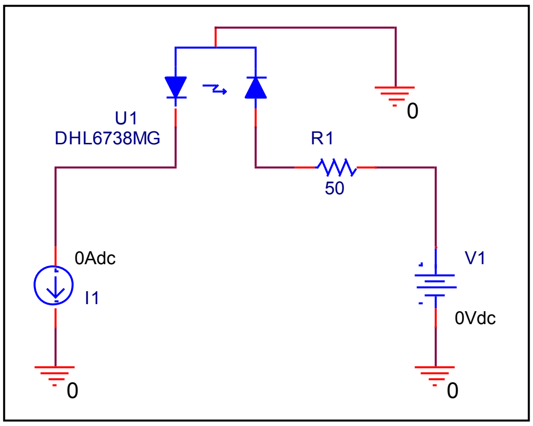
PSpice model parameter	Model description
IS	Saturation Current
N	Emission Coefficient
RS	Series Resistance
IKF	High-injection Knee Current
CJO	Zero-bias Junction Capacitance
M	Junction Grading Coefficient
VJ	Junction Potential
ISR	Recombination Current Saturation Value
BV	Reverse Breakdown Voltage(a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

Optical Output Power vs. Forward current characteristics

Circuit simulation result



Evaluation circuit



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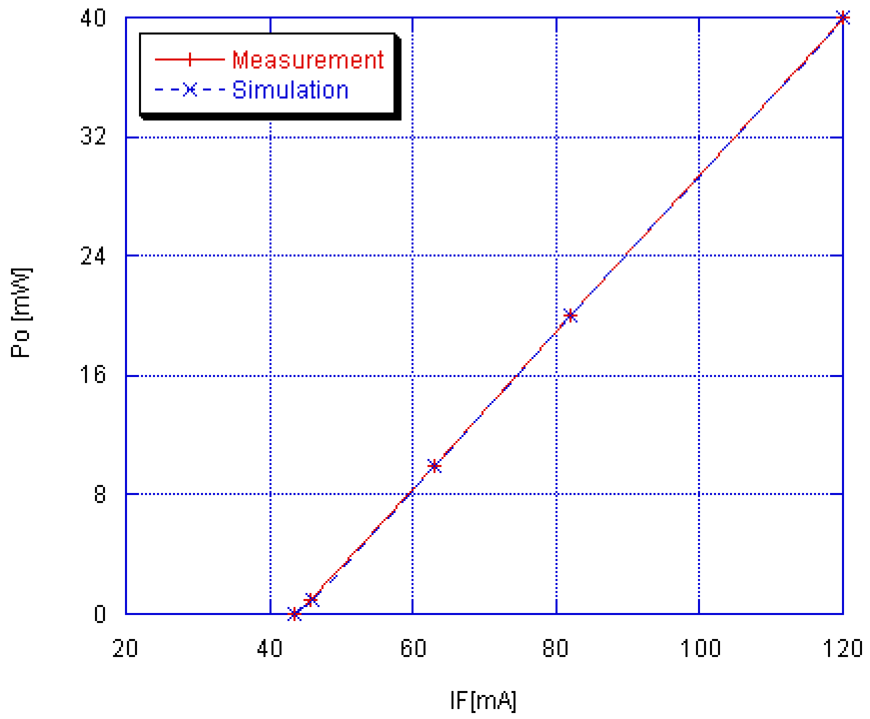
Comparison graph

Circuit simulation result

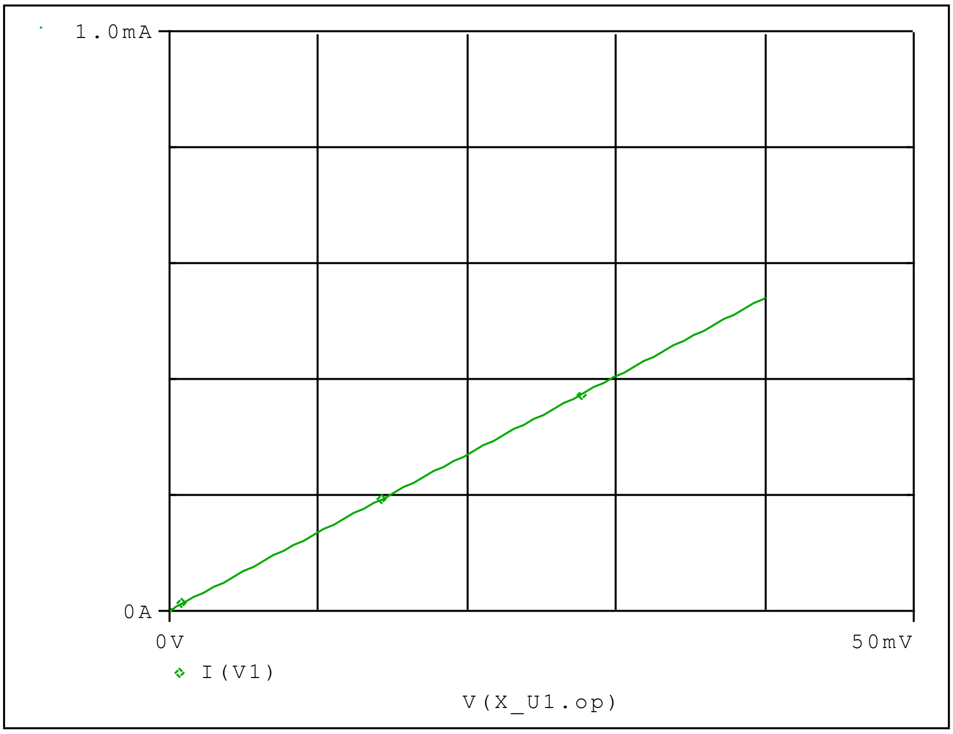


Simulation Result

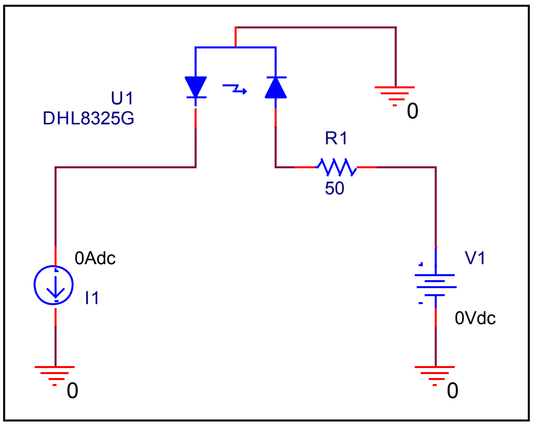
Po [mW]	IF[mA] Measurement	IF[mA] Simulation	Error (%)
1.000	45.800	45.860	0.131
10.000	62.900	62.950	0.079
20.000	81.900	81.950	0.061
30.000	100.900	101.000	0.099
40.000	120.000	120.000	0.000

Monitor Current vs. Optical Output Power characteristics

Circuit simulation result

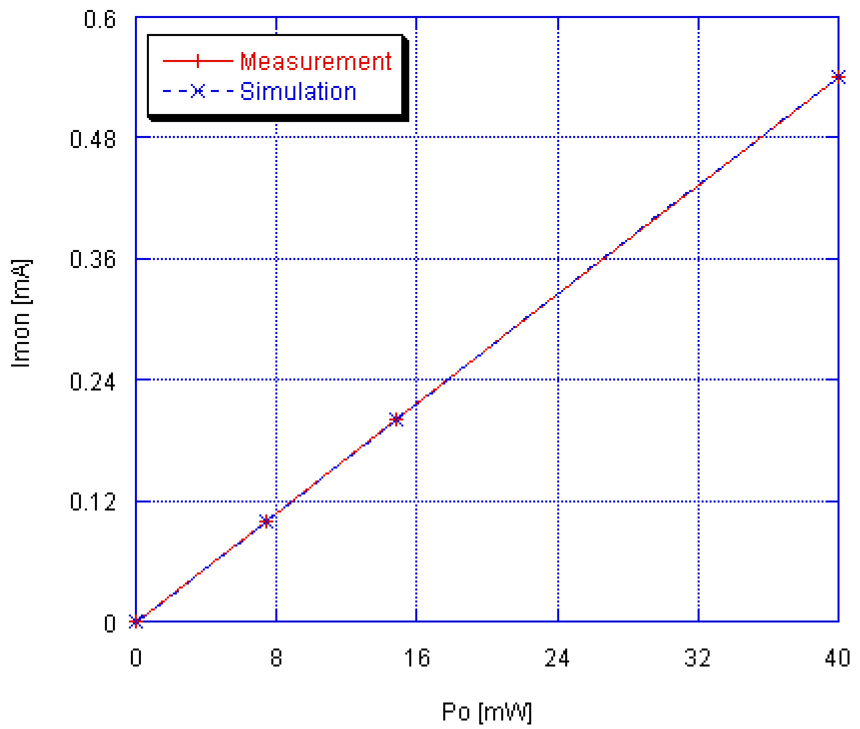


Evaluation circuit



Comparison graph

Circuit simulation result



Simulation Result

Imon [mA]	Po [mW]		Error (%)
	Measurement	**Simulation**	
0.100	**7.407**	**7.407**	**0.000**
0.200	**14.815**	**14.815**	**0.000**
0.540	**40.000**	**40.000**	**0.000**