



SANYO Semiconductors

DATA SHEET

LA9450CL — Bi-CMOS IC For Laser Diode Pulse Driver IC

Overview

The LA9450CL is a pulse driver IC for laser diode that enables low voltage operation.

Features

- Two-power voltage design for low power consumption. Two-mode switching function of DC (supplied from V_{CC1} : 2.4V) and pulse luminescence (supplied from V_{CC2} : 2.8V).
- Low voltage (V_{CC1} =2.0V min, V_{CC2} =2.6V min) and low current consumption (I_{CC1} =500 μ A) design.
- Low saturation PNP driver is used for DC mode for the low V_{CEsat} .
- Small package ECSP3020-10 (size 3 \times 2mm, pin pitch 0.65mm)

Function

- Laser driver
- Two-mode switching functions of DC and pulse luminescence

Specifications

Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC\ max}$		4.5	V
Allowable power dissipation	$P_d\ max$	For every 1°C rise in temperature over 25°C, the power is reduced by a factor of 1.55mW/°C	150	mW
Operating temperature	T_{opr}		-10 to +70	°C
Storage temperature	T_{stg}		-40 to +125	°C

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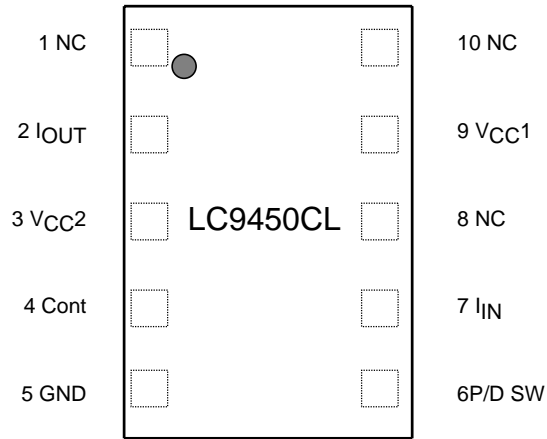
SANYO Semiconductor Co., Ltd.

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

LA9450CL

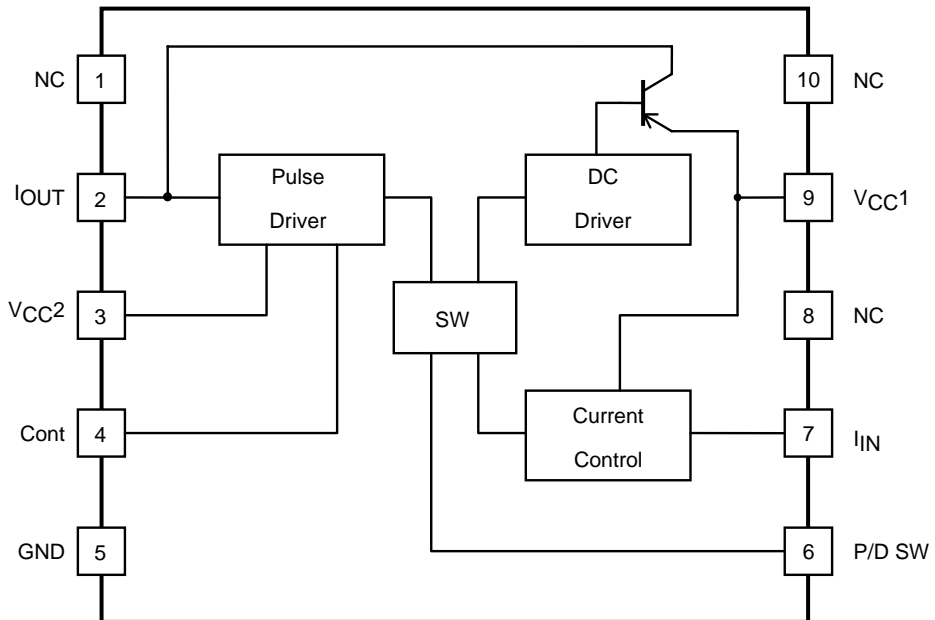
Pin Assignment

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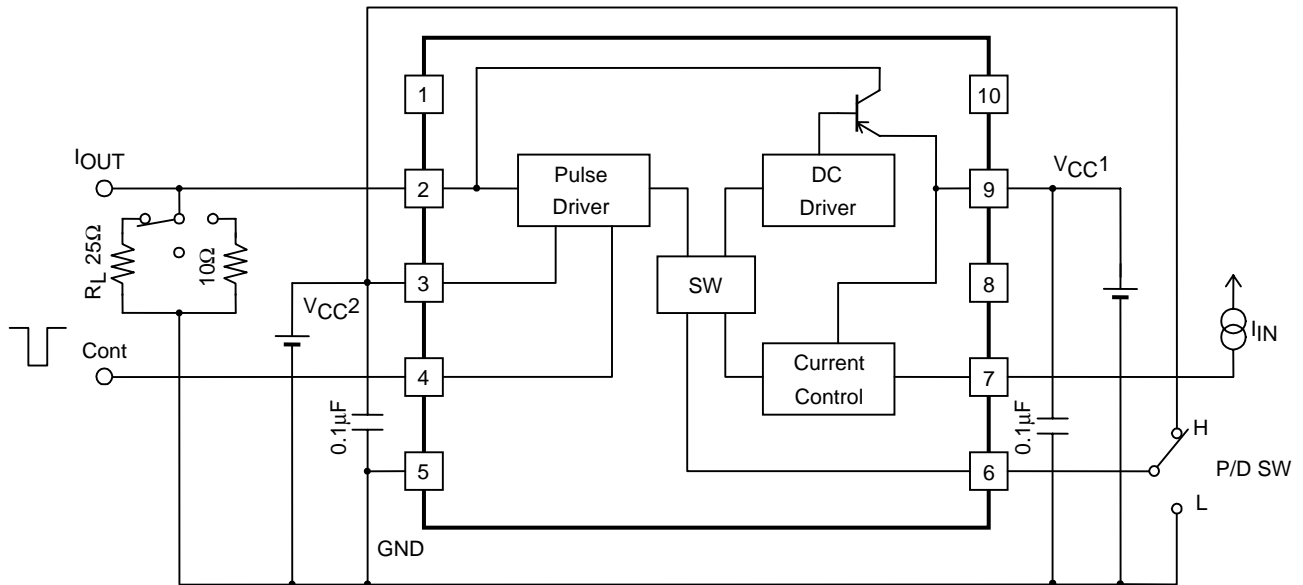
Top view

Block Diagram



Pin Functions

Pin No.	Pin Name	Pin Description	Equivalent Circuit
1	NC	NC	
2	IOUT	This is a LD driver output terminal.	
3	VCC2	This is a supply terminal for a pulse driver output. In DC luminescence mode, voltage which is bigger than VCC1, and flowing are available.	
4	Cont	"Low" at pulse driver, and IOUT output is ON.	
5	GND		
6	P/D SW	This is a switching terminal for DC/Pulse. (Low: DC, High: Pulse)	
7	IIN	This is a controlled current input terminal. (Input resistance 330Ω)	
8	NC	NC	
9	VCC1	This is a power supply terminal of a controlled circuit and driver output at DC luminescence. This can be connected to VCC2 to use as a common power supply.	
10	NC	NC	



Power supplies of IOUT drive current - Pulse mode: VCC2
 DC mode: VCC1

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