

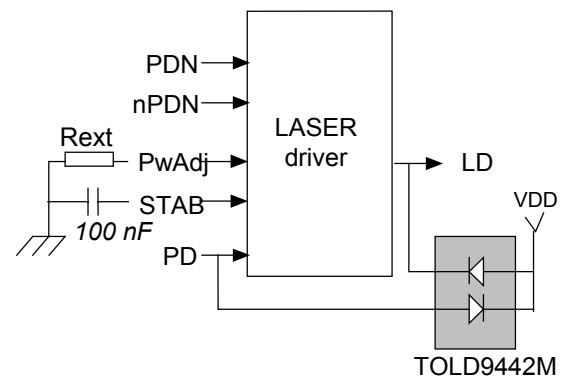
DATA SHEET

Typical Applications

→ bar code reader

Features

- Technology CMOS
- Area : 0.9 mm² (1000μm x 900μm)
- Consumption : 1.24 mA maximum
- Operating supply voltage : 3 V – 5.5 V
- Power down mode
- Laser current 35 mA (can be adjusted)



Pin Name	Description
PD	Photodiode current
LD	Laser current output
PwAdj	Laser power adjustment with external resistor. Laser current increases when external resistor increases.
STAB	Laser power stability with external capacitor (100 nF)
PDN	power down signal (active high)
nPDN	inverted power down signal (active low)
VDD	High power supply
VSS	Low power supply

Product Description

This block drives a laser diode (model TOLD9442M) with a nominal current 35mA without any spike.

The laser driver regulates the current of the laser diode according to the optical power received by the photodiode.

A power down mode is available

Absolute Maximum Ratings

Symbol	Parameter	Min	Typ	Max	Unit
VDD	Power supply voltage	3		5.5	V
T _j c	Junction temperature	0		60	°C
T _{st}	Storage temperature	-65		150	°C

DC Characteristics

Symbol	Parameter	Min	Typ	Max	Unit
VDD	High power supply	3		5.5	V
VSS	Low power supply		0		V
IDD	Supply Current	1.17		1.24	mA
IDD_PD	Supply Current in Power Down Mode			0.1	μA
I _{laser}	laser current		35		mA
I _{limit}	Limitation current	66		81	mA
I _{pdiode}	Photodiode current	28		140	μA
R _{ext}	external resistor	0.12		1.1	kOhms

AC Characteristics

Symbol	Parameter	Min	Typ	Max	Unit
	output noise (DC to 2.8 MHz)	0.55		1.22	μA RMS

Timings

Symbol	Parameter	Min	Typ	Max	Unit
T _{INH}	Inhibition time			50	μs
T _{ACT}	Activation time			10	ms