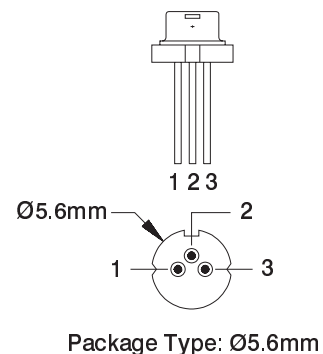
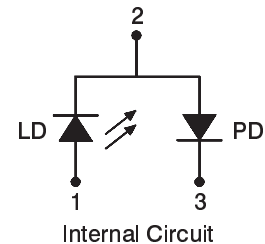


Toshiba TOLD9441MC

Laser Diode Specifications

The Toshiba TOLD9441MC is an index guided laser diode with a multi-quantum well structure. Developed for DVD applications, the TOLD9441MC has a maximum optical output of 7mW and a typical operating wavelength of 650nm. With an extended operating temperature of +70°C and a visible beam, the diode is also applicable to other industrial products such as bar-code readers and laser alignment systems. The TOLD9441MC has a Ø5.6mm package.



Absolute Maximum Ratings (Tc=25 °C)

Characteristic	Symbol	Value	Unit
Optical output power	Po	7	mW
Laser diode reverse voltage	VR(LD)	2	V
Photodiode reverse voltage	VR(PD)	30	V
Operating temperature	Topr	-10 to +70	°C
Storage temperature	Tstg	-40 to +85	°C

Operating and Electrical Characteristics (Tc=25 °C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Threshold current	Ith	—	40	70	mA	—
Operating current	Iop	—	50	80	mA	Po=5mW
Operating voltage	Vop	—	2.2	3.0	V	Po=5mW
Lasing Wavelength	λ_p	640	650	660	nm	Po=5mW
Beam divergence (parallel)	$\theta_{//}$	5	8	12	deg	Po=5mW, (FWHM)
Beam divergence (perpendicular)	$\theta_{\perp}$	24	28	35	deg	Po=5mW, (FWHM)
Monitor current	Im	0.07	0.25	0.5	mA	Po=5mW
Photodiode dark current	ID(PD)	—	—	100	nA	VR(PD)=5V
Photodiode total capacitance	CT(PD)	—	—	20	pF	VR(PD)=5V, f=1MHz
Astigmatism	As	—	8	—	microns	—

Disclaimer: The laser diode information summarized above is based on the respective diode manufacturer's commercial catalog and/or data sheet specifications. The data is presumed to be accurate; however, it is subject to change without notice. Optima makes no representation as to the accuracy of the information and does not assume any responsibility for errors or omissions contained herein. The user must refer to the manufacturers specifications for details concerning the intended application and operation, diode limitations, and safety.

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