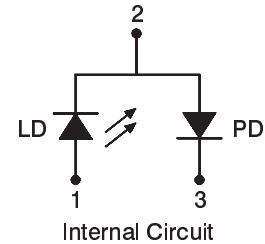


Optima NIR-0120-785 Laser Diode Specifications

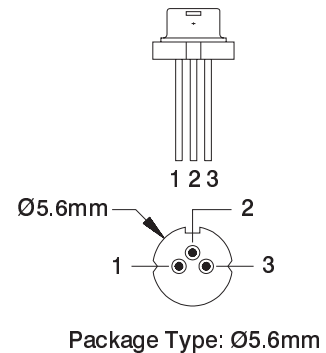
Optima p/n NIR-0120-785 is a near infrared laser diode utilizing a quantum well design and intended for applications requiring high-power. Operating at nominal wavelength of 785nm, the absolute maximum optical power is 120mW in the CW mode with an extended operating temperature range of +70°C. Operated in the pulse mode the diode is capable of 280mW (* Pulse mode is defined as a pulse width of <10nsec and a duty cycle of <0.1%). The NIR-0120-785 is packaged in the typical Ø5.6mm can.

The diode is similar to the obsolete Sanyo DL 7140-201... specifications should be evaluated by the user for the intended use. While being a pin for pin replacement, the operating parameters are quite different ie. PD feedback current and LD drive current.



Absolute Maximum Ratings (Tc=25 °C)

Characteristic	Symbol	Value	Unit
Optical output power	Po (CW)	120	mW
	* Po (Pulse)	280	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	I _{th}	–	35	55	mA	CW
Operating current	I _{op}	–	135	190	mA	CW, Po=100mW
Operating voltage	V _{op}	–	2.3	2.8	V	CW, Po=100mW
Slope efficiency	η	0.8	1.0	–	W / A	CW, Po= 5 – 100mW
Lasing wavelength	λ _p	775	783	795	nm	CW, Po=100mW
Beam divergence (parallel)	θ _{//}	6	9	12	deg	Po=100mW, (FWHM)
Beam divergence (perpendicular)	θ _⊥	13	16	19	deg	Po=100mW, (FWHM)
Monitor current	I _m	50	190	600	μA	CW, Po=100mW, V _{rd} =5V
Beam angle (parallel)	dθ _{//}	–3	–	3	deg	CW, Po=100mW
Beam angle (perpendicular)	dθ _⊥	–3	–	3	deg	CW, Po=100mW

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 manufacturer's specifications for details concerning the intended application and operation, diode limitations, and safety.

For current pricing and stock availability please contact:

Optima Precision Inc. 775 SW Long Farm Road West Linn, Oregon 97068 U.S.A.
 Phone: (503) 638-2525 Fax: (503) 638-4545 email: sales1@optima-optics.com
 Website: <http://www.optima-optics.com>