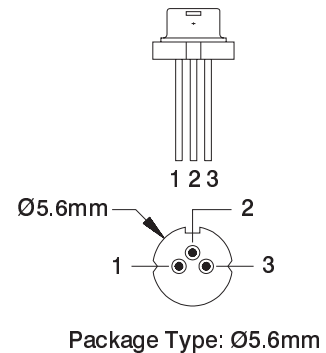
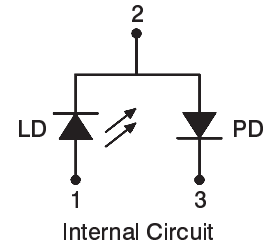


Panasonic LNCQ05PS Laser Diode Specifications

The Panasonic LNCQ05PS is an AlGaInP laser diode with a highly visible red beam. Specifically developed for optical information systems, the 660nm output conforms to standards required by DVD-RAM and DVD-R applications. Using a unique crystal growth technique, the LNCQ05PS combines high output (50mW in the CW mode and 70mW in pulse mode) with a low operating current and good reliability at an extended operating temperature of +60°C. This high power visible diode is very cost effective and therefore should be applicable to other industrial products such as laser communication systems and laser alignment systems. The diode has a Ø5.6mm package.



Absolute Maximum Ratings (Tc=25 °C)

Characteristic	Symbol	Value	Unit
Optical output power	Po	50	mW
Pulse optical output power	Po (pulse)	70 *	mW
Laser diode reverse voltage	VR(LD)	1.5	V
Photodiode reverse voltage	VR(PD)	30	V
Operating temperature	Topr	-10 to +60	°C
Storage temperature	Tstg	-40 to +80	°C

Notes: *Pulse condition - Less than 50% duty cycle, less than 1μs pulse width, and no bias.

Operating and Electrical Characteristics (Tc=25 °C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Threshold current	Ith	20	35	50	mA	CW
Operating current	Iop	60	90	115	mA	CW, Po=50mW
Laser diode operating voltage	Vop	2.0	2.5	3.0	V	CW, Po=50mW
Lasing wavelength	λp	645	660	675	nm	CW, Po=50mW
Beam divergence (parallel)	θ//	7.0	8.5	10.5	deg	CW, Po=50mW, (FWHM)
Beam divergence (perpendicular)	θ⊥	17.5	22.0	26.5	deg	CW, Po=50mW, (FWHM)
Differential efficiency	η	0.5	0.9	1.2	mW/mA	CW, Po=45mW 45mW / I (50mW) - I (5mW)
Monitor current	Im	—	0.1	—	mA	CW, Po=50mW
Photodiode dark current	ID(PD)	—	—	0.1	μA	VR(PD)=15V

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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