ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44 OFFICE@ROITHNER-LASER.COM

QLD905-60MG

- **Infrared Laser Diode**
- **905 nm, 60 mW, SM**
- **TO56 package, Flat Window**

RoHS COMPLIANT Pb Pb-Free

Description

QLD905-60MG is an infrared Fabry Perot quantum well laser diode, typically emitting at 905 nm, with a nominal output power of 60 mW. It features single mode emission and wide operating temperature range of up to 70°C. It is an efficient radiation source for many industrial applications. **QLD905-60MG** comes in 5.6 mm TO-Can package **with integrated PD.**

Maximum Ratings* (T_{CASE} = 25°C)

Parameter	Symbol	Values Min.	Values Max.	Unit
Optical Output Power*1	$P_{O(CW)}$		100	mW
	$P_{O(PULSE)}$*2		300	mW
LD Reverse Voltage	V_{RLD}		2	V
PD Reverse Voltage	V_{RPD}		30	V
Operating Temperature*1	T_{OPR}	- 10	+ 70	°C
Storage Temperature	T_{STG}	- 40	+ 80	°C
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	°C

* operating close to or outside these conditions may damage the device
*2 pulse width < 10 ns, duty cycle < 0.1%

Electro-Optical Characteristics (T_{CASE} = 25°C, P_O=60 mW)

Parameter		Symbol	Values Min.	Values Typ.	Values Max.	Unit
Peak Wavelength		**λ_P**	**895**	**905**	**915**	**nm**
Optical Output Power		P_O		60		mW
Spectral Width (FWHM)		$\Delta\lambda$		2		nm
Operating Voltage		V_F		1.7	2.3	V
Threshold Current		I_{th}		23	60	mA
Operating Current		I_F		95	130	mA
Monitor Current		I_M		0.2		mA
Slope Efficiency		CW	0.8	0.9		W/A
Beam Divergence (FWHM)	parallel	$\Theta\parallel$	8	10	14	deg.
	perpendicular	$\Theta\perp$	14	18	23	deg.

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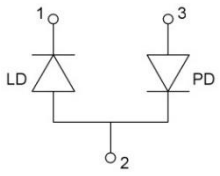
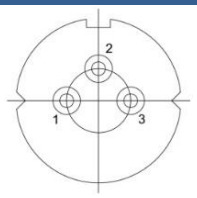
Electrical Connection

Pin Configuration

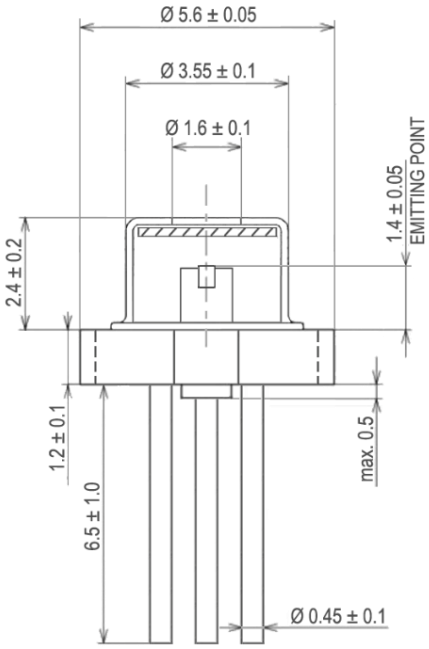
Pin #	Function
Pin 1	LD Cathode
Pin 2 [case]	LD Anode, PD Cathode
Pin 3	PD Anode

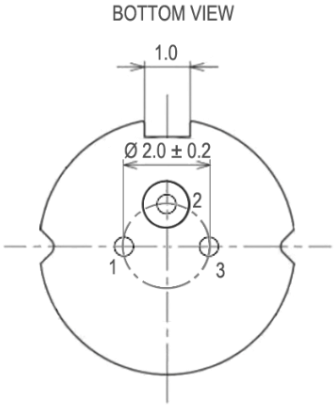


Bottom View



Outline Dimensions





All dimensions in mm

Precautions

Safety

Caution: This laser diode emits highly concentrated light which can be **hazardous to the human eye and skin**. This diode is classified as **CLASS 3B laser product** according to **IEC 60825-1** and **21 CFR Part 1040.10 Safety Standards**.

ESD caution

Always do handle laser diodes with extreme care to **prevent electrostatic discharge**, the primary cause of unexpected diode failure. To prevent ESD related failures, it is strongly advised to always **wearing wrist straps**, and **grounding all applicable work surfaces**, when handling laser diodes

Operating considerations

It is strongly advised to only operate this laser diode with a current source. The current of a laser diode is an exponential function of the voltage across it. **Usage of current regulated drive circuits is mandatory.** Laser diodes may be damaged by excessive drive currents or switching transients. **Proper heat sinking will greatly enhance stability and lifetime of the laser diode**