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PH808DBR Mercury Series

# PH808DBR Mercury™ Series High-Power Single- Frequency Laser Diode 808 nm Laser Diode in Mercury™ TOSA Package Technology

- DBR Single-Frequency Laser Chip
- AlGaAs QW Active Layer

## Features

- Robust, monolithic die design
- Pulsed operation for spectral stability at short pulse lengths
- Package contains TEC cooling with precise thermistor control
- High Slope Efficiency
- Hermetic package for high reliability

## Description

The 808nm Mercury™ series of high-power edge-emitting lasers are based on Photodigm's advanced single-frequency laser technology. It provides a diffraction limited, single lateral and longitudinal mode beam in a compact hermetic package. Facets are passivated for high-power reliability. Applications include mobile spectroscopy instrumentation where durability and reliability are essential.

### Absolute Maximum Rating

Parameter	Symbol	Unit	Min	Max
Storage Temperature	$T_{STG}$	°C	0	80
Operating Temperature	$T_{OP}$	°C	5.0	70
CW Laser Forward Current, $T=25^{\circ}C$	$I_F$	mA	-	**
Laser Reverse Voltage	$V_R$	V	-	0.0
TEC Current	$I_{TEC}$	A	-1.1	1.1
TEC Voltage		V	-3.0	3.0

	$V_{TEC}$			
Thermistor Current	$I_{THRM}$	mA	-	1.0
Thermistor Voltage	$V_{THRM}$	V	-	10

\*\*Do not exceed drive current or operating power of supplied LIV

### CW Characteristics at $T_C = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Unit	Min	Typ	Max
Center Wavelength @ 150mA	$\lambda_c$	nm	805	807	809
Optical Output Power	$P_o$	mW	See Power Options Call-out		
Slope Efficiency	$\eta_d$	W/A	0.6	0.75	-
Threshold Current	$I_{th}$	mA	-	50	80
Laser Series Resistance	$R_S$	$\Omega$	-	2.0	2.5

Laser Forward Voltage @ 150mA	$V_F$	V	-	2.0	2.5
Thermistor Resistance @ 25°C	$R_T$	K $\Omega$	-	10	-
Laser Line Width	$\Delta\nu$	MHz	-	1	10
Beam Divergence @ FWHM	$\theta_{  } \times \theta_{\perp}$	°	-	6 X 28	8 X 32
Side Mode Suppression Ratio					

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1155 E. Collins  
Blvd., Suite 200

Richardson TX  
75081

972-235-7584

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