

# GH06507B2A/GH06507B2B

## Red Laser Diode for DVD-ROM Drive(654nm-7mW)

### ■ Features

- (1) Maximum optical power output : 7mW (CW)
- (2) Wavelength : TYP. 654nm
- (3) Operating temperature : MAX. 80°C
- (4)  $\phi$ 5.6 mm package

### ■ Model No.

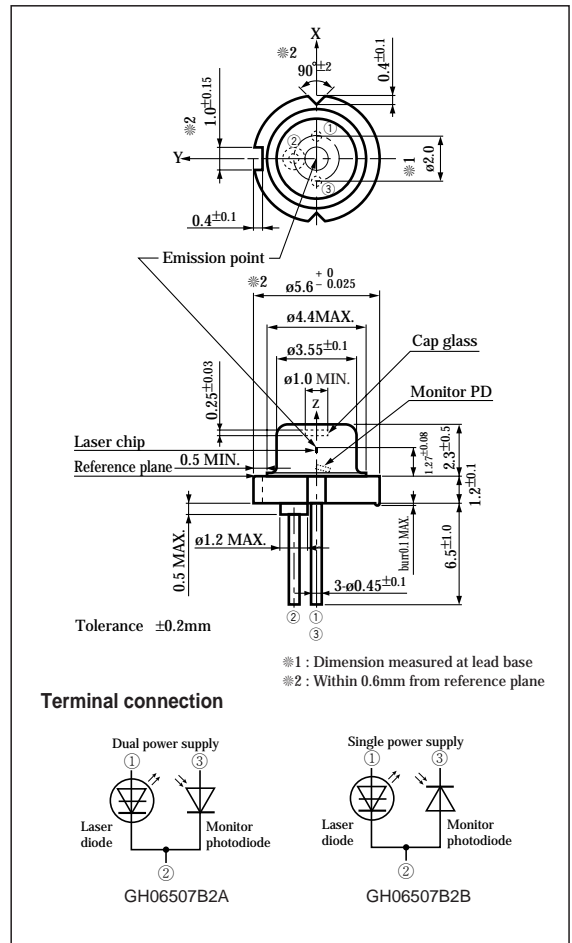
- (1) GH06507B2A.....Dual power supply
- (2) GH06507B2B.....Single power supply

### ■ Applications

- (1) DVD-ROM drives
- (2) DVD video players

### ■ Outline Dimensions

(Unit : mm)



### ■ Absolute Maximum Ratings

(T<sub>c</sub>=25°C)

Parameter	Symbol	Rating	Unit	
※3 Optical power output	P <sub>o</sub>	7	mW	
Reverse voltage	Laser	V <sub>rl</sub>	2	V
	Monitor photodiode	V <sub>rd</sub>	30	V
※1 Operating temperature	T <sub>op(c)</sub>	-10 to +80	°C	
※1 Storage temperature	T <sub>stg</sub>	-40 to +85	°C	
※2 Soldering temperature	T <sub>slid</sub>	260	°C	

※1 Case temperature

※2 At the position of 1.6mm or more from the lead base (5s)

※3 CW (Continuous Wave) drive

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## ■ Electro-optical Characteristics<sup>\*1</sup>

(T<sub>c</sub>=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current		I <sub>th</sub>	—	-	23	35	mA
Operating current		I <sub>op</sub>	P <sub>o</sub> =5mW	-	33	45	mA
Operating voltage		V <sub>op</sub>	P <sub>o</sub> =5mW	-	2.2	2.5	V
Wavelength		λ <sub>p</sub>	P <sub>o</sub> =5mW	640	654	660	nm
*2 Half intensity angle	Parallel	θ//	P <sub>o</sub> =5mW	7	8.5	10	°
	Perpendicular	θ⊥	P <sub>o</sub> =5mW	24	29	33	°
*4 Ripple		R <sub>i</sub>	P <sub>o</sub> =5mW	-20	-	+20	%
Misalignment angle	Parallel	Δθ//	P <sub>o</sub> =5mW	-2	-	+2	°
	Perpendicular	Δθ⊥	P <sub>o</sub> =5mW	-3	-	+3	°
Interference pattern intensity		α	P <sub>o</sub> =5mW	-	-	1	-
Differential efficiency		η <sub>d</sub>	$\frac{3\text{mW}}{I(5\text{mW}) - I(2\text{mW})}$	0.3	0.55	0.8	mW/mA

\*1 Initial value, CW (Continuous Wave) drive

\*2 Angle at 50% peak intensity (full-width at half-maximum)

\*3 Parallel to the junction plane (X-Z plane), Perpendicular to the junction plane (Y-Z plane)

\*4 R<sub>i</sub>=ΔP/P ΔP : the maximum deviation of the far field pattern from its approximate curve P : the peak of the approximate curve

## ■ Electrical Characteristics of Photodiode (GH06507B2A)

(T<sub>c</sub>=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I <sub>m</sub>	P <sub>o</sub> =5mW, V <sub>rd</sub> =5V	0.2	0.55	1.0	mA
Dark current	I <sub>D</sub>	V <sub>rd</sub> =5V	-	-	150	nA
Terminal capacitance	C <sub>t</sub>	V <sub>rd</sub> =5V, f=1MHz	-	3.5	-	pF

## (GH06507B2B)

(T<sub>c</sub>=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I <sub>m</sub>	P <sub>o</sub> =5mW, V <sub>rd</sub> =5V	0.07	0.2	0.35	mA
Dark current	I <sub>D</sub>	V <sub>rd</sub> =5V	-	-	150	nA
Terminal capacitance	C <sub>t</sub>	V <sub>rd</sub> =5V, f=1MHz	-	3.5	-	pF

• Please refer to the chapter "Handling Precautions"

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