

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) ϕ 5.6 mm package

■ Model No.

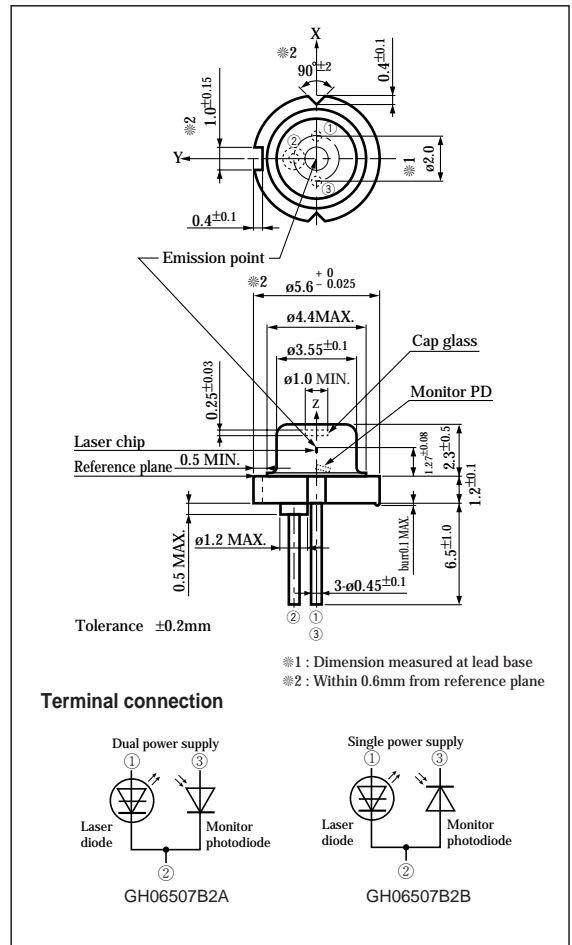
- (1) GH06507B2A.....Dual power supply
- (2) GH06507B2B.....Single power supply

■ Applications

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

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

(T_c=25°C)

Parameter	Symbol	Rating	Unit
※3 Optical power output	P _o	7	mW
Reverse voltage	Laser	V _{rl}	2
	Monitor photodiode	V _{rd}	30
※1 Operating temperature	T _{op(c)}	-10 to +80	°C
※1 Storage temperature	T _{stg}	-40 to +85	°C
※2 Soldering temperature	T _{slid}	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^{※1}

(T_c=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit	
Threshold current	I _{th}	—	-	23	35	mA	
Operating current	I _{op}	P _o =5mW	-	33	45	mA	
Operating voltage	V _{op}	P _o =5mW	-	2.2	2.5	V	
Wavelength	λ _p	P _o =5mW	640	654	660	nm	
※2 Half intensity angle	Parallel	θ//	P _o =5mW	7	8.5	10	°
	Perpendicular	θ⊥	P _o =5mW	24	29	33	°
※4 Ripple	R _r	P _o =5mW	-20	-	+20	%	
Misalignment angle	Parallel	Δθ//	P _o =5mW	-2	-	+2	°
	Perpendicular	Δθ⊥	P _o =5mW	-3	-	+3	°
Interference pattern intensity	α	P _o =5mW	-	-	1	-	
Differential efficiency	η _d	$\frac{3\text{mW}}{I(5\text{mW}) - I(2\text{mW})}$	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 $R_r = \Delta P / P$ 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_c=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I _m	P _o =5mW, V _{rd} =5V	0.2	0.55	1.0	mA
Dark current	I _D	V _{rd} =5V	-	-	150	nA
Terminal capacitance	C _t	V _{rd} =5V, f=1MHz	-	3.5	-	pF

(GH06507B2B)

(T_c=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I _m	P _o =5mW, V _{rd} =5V	0.07	0.2	0.35	mA
Dark current	I _D	V _{rd} =5V	-	-	150	nA
Terminal capacitance	C _t	V _{rd} =5V, f=1MHz	-	3.5	-	pF

• Please refer to the chapter "Handling Precautions"

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- Office automation equipment
- Telecommunication equipment [terminal]
- Test and measurement equipment
- Industrial control
- Audio visual equipment
- Consumer electronics

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- Traffic signals
- Gas leakage sensor breakers
- Alarm equipment
- Various safety devices, etc.

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