

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.

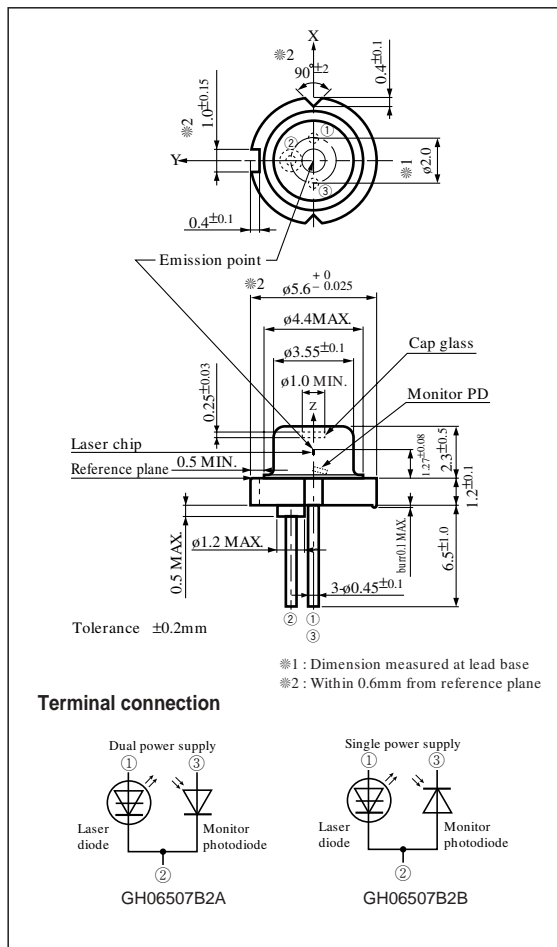
- (1) GH06507B2A....Dual power supply
- (2) GH06507B2B....Single power supply

■ 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 V
	Monitor photodiode	V _{rd}	30 V
※1 Operating temperature	T _{op(e)}	-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 _i	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	$\frac{3mW}{I(5mW) - I(2mW)}$	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_i=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_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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