

GH06510B1A/GH06510B1B

Red Laser Diode for DVD-ROM Drive(654nm-10mW)

Features

- (1) Maximum optical power output : 10mW (CW)
- (2) Wavelength : TYP. 654nm
- (3) Low current drive type (I_{op} : 40mA)
- (4) $\phi 5.6$ mm open package
- (5) Reasonable price

Model No.

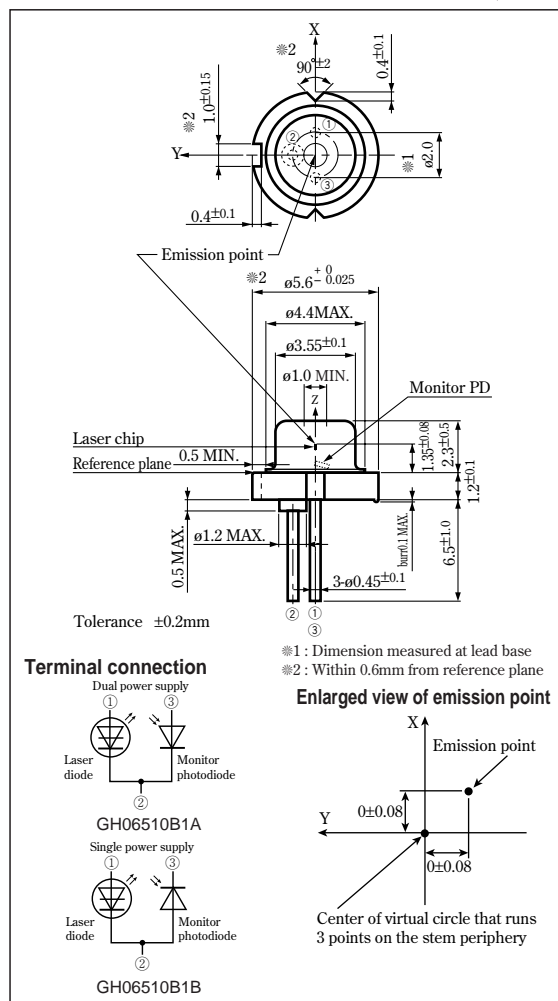
- (1) GH06510B1ADual power supply
- (2) GH06510B1BSingle power supply

Applications

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

Outline Dimensions

(Unit : mm)



Absolute Maximum Ratings

(T_C=25°C ※1)

Parameter	Symbol	Rating	Unit
※3 Optical power output	P _O	10	mW
Reverse voltage	Laser V _{rl}	2	V
	Monitor photodiode V _{rd}	30	V
※1 Operating temperature	T _{op(c)}	-10 to +70	°C
Storage temperature	T _{stg}	-40 to +85	°C
※2 Soldering temperature	T _{sld}	300	°C

※1 Case temperature

※2 At the position of 1.6mm or more from the lead base (3s)

※3 CW (Continuous Wave) drive

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■ Electro-optical Characteristics^{※1} (Tc=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current		I _{th}	—	-	30	45	mA
Operating current		I _{op}	Po=7mW	-	40	55	mA
Operating voltage		V _{op}		-	2.2	2.5	V
Wavelength		λ _p		640	654	660	nm
Half intensity angle	※2※3 Parallel	θ//		7	8.5	10	°
	※2※3 Perpendicular	θ⊥		24	29	33	°
※4 Ripple		R _i		-20	-	+20	%
Misalignment angle	※3 Parallel	Δθ//		-2	-	+2	°
	※3 Perpendicular	Δθ⊥		-3	-	+3	°
Differential efficiency		η _d	$\frac{5mW}{I(7mW)-I(2mW)}$	0.38	0.7	1.05	mW/mA
Interference pattern intensity		α	Po=7mW	-	-	1	-

※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 (GH06510B1A) (Tc=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I _m	Po=7mW, V _{rd} =5V	0.08	0.2	0.4	mA
Dark current	I _b	V _{rd} =5V	-	-	150	nA
Terminal capacitance	C _t	V _{rd} =5V, f=1MHz	-	3.5	-	pF

(GH06510B1B) (Tc=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I _m	Po=7mW, V _{rd} =5V	0.03	0.08	0.15	mA
Dark current	I _b	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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