

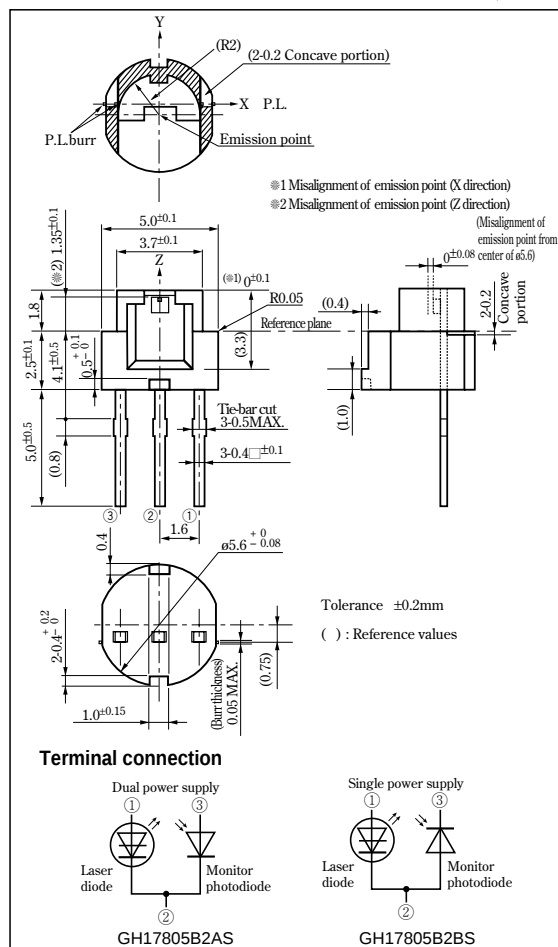
Insert Frame Structure, Resin Type Laser Diode for CD Audio/CD-ROM Drive(780nm-5mW)

- (1) $\phi 5.6\text{mm}$ open type insert lead frame structure
(Optically compatible with the conventional $\phi 5.6\text{mm}$ package)
- (2) Maximum optical power output : 5mW (CW)
- (3) Wavelength : TYP. 780nm

- (1) GH17805B2ASDual power supply
- (2) GH17805B2BSSingle power supply

- (1) CD audio players
- (2) CD-ROM drives

(Unit : mm)

(T_C=25°C ※1)

Parameter		Symbol	Rating	Unit
*3	Optical power output	P _o	5	mW
	Reverse voltage	Laser V _{rl}	2	V
		Monitor photodiode V _{rd}	30	
*1	Operating temperature	T _{op(c)}	-10 to +70	°C
	Storage temperature	T _{stg}	-40 to +85	°C
*2	Soldering temperature	T _{sld}	260	°C

*3 CW (Continuous Wave) drive

■ Electro-optical Characteristics^{※1}

(Tc=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current		I _{th}	—	-	(35)	45	mA
Operating current		I _{op}	Po=3mW	-	(42)	52	mA
Operating voltage		V _{op}		-	(1.9)	2.3	V
Wavelength		λ _p		770	(780)	795	nm
Half intensity angle	※2※3 Parallel	θ//		8	(11)	15	°
	※2※3 Perpendicular	θ⊥		29	(37)	49	°
※4 Ripple		R _i		-20	-	+20	%
Misalignment angle	※3 Parallel	Δθ//		-2	-	+2	°
	※3 Perpendicular	Δθ⊥		-3	-	+3	°
Differential efficiency		η _d	$\frac{2\text{mW}}{I(3\text{mW})-I(1\text{mW})}$	0.15	(0.35)	0.6	mW/mA
Interference pattern intensity		α	Po=3mW	-	-	0.97	-
Kink		K-LI	—	-	-	10	%

※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 $R_i = \Delta P / P$ ΔP : the maximum deviation of the far field pattern from its approximate curve P : the peak of the approximate curve

■ Electrical Characteristics of Photodiode

(GH17805B2AS)

(Tc=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I _m	Po=3mW, V _{rd} =5V	0.1	(0.28)	0.45	mA
Dark current	I _d	V _{rd} =5V	-	-	150	nA

(GH17805B2BS)

(Tc=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I _m	Po=3mW, V _{rd} =5V	0.05	(0.17)	0.5	mA
Dark current	I _d	V _{rd} =5V	-	-	150	nA

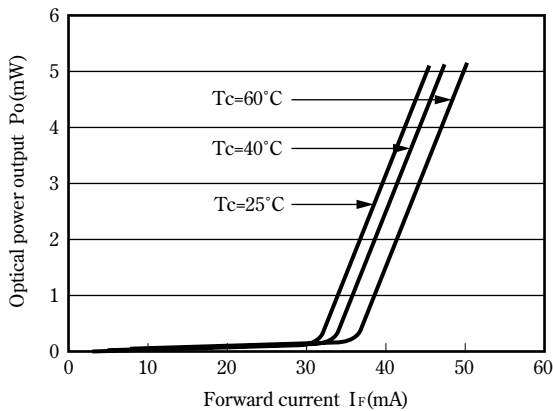
- Operating and handling precautions
- (1)

This product employs open type package. Be careful not to touch gold wires, laser chips, or monitor sub-mount chips directly, or characteristics may be damaged.
- (2)

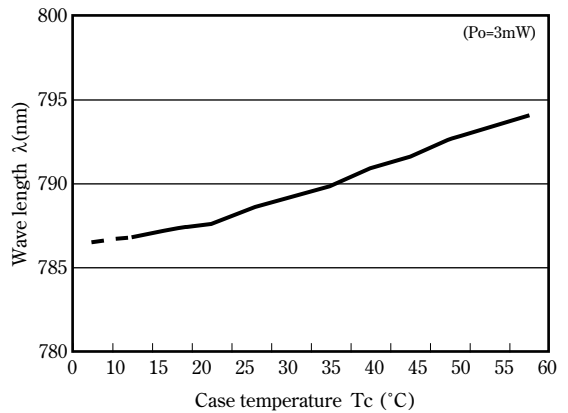
The lead pins of this product consist of silver-plating.
Do not operate under the conditions of freezing or dew formation. The use in such conditions may cause short circuits due to silver migration.
- (3)

Please finish soldering within 7 days, or keep the products in the N₂-purged box after opening the package to prevent silver oxidation or damage to solderability.

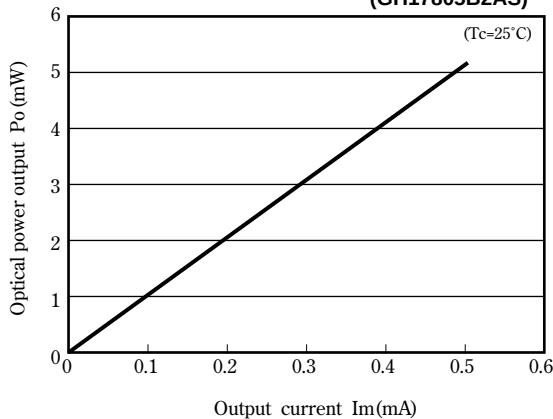
Optical power output - Forward current



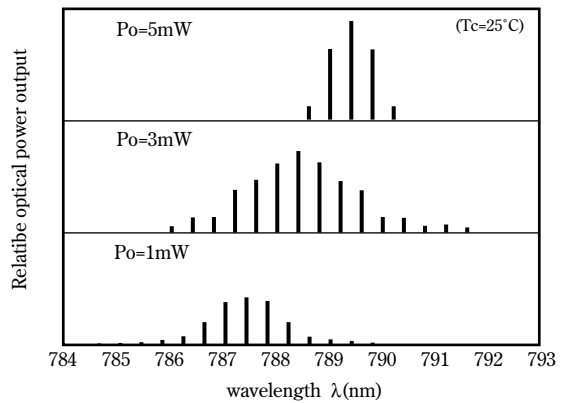
Case temperature dependence of wavelength



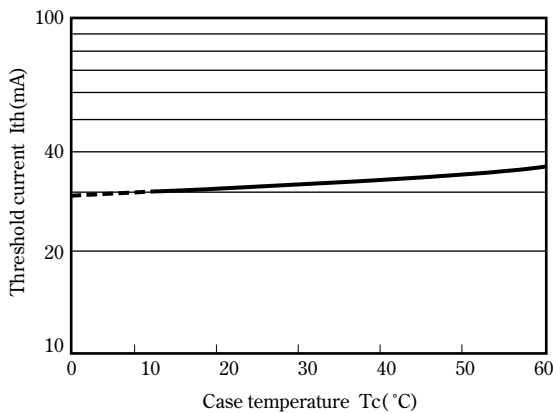
Optical power output - Output current (GH17805B2AS)



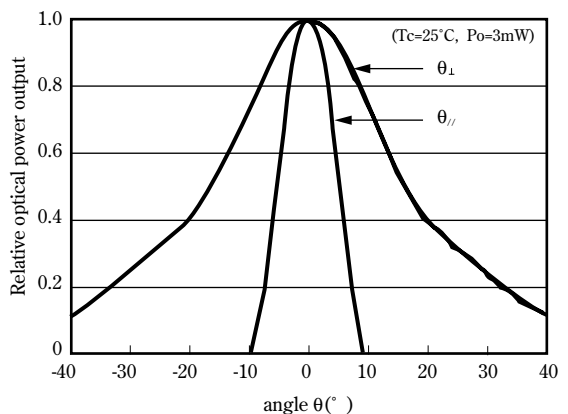
Optical power output dependence of wavelength



Case temperature dependence of threshold current



Far field pattern (FFP)



Note) Characteristics shown in diagrams are typical values. (not assurance value)

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 - Alarm equipment
 - Various safety devices, etc.
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