GH17805D2AS

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

■ Features

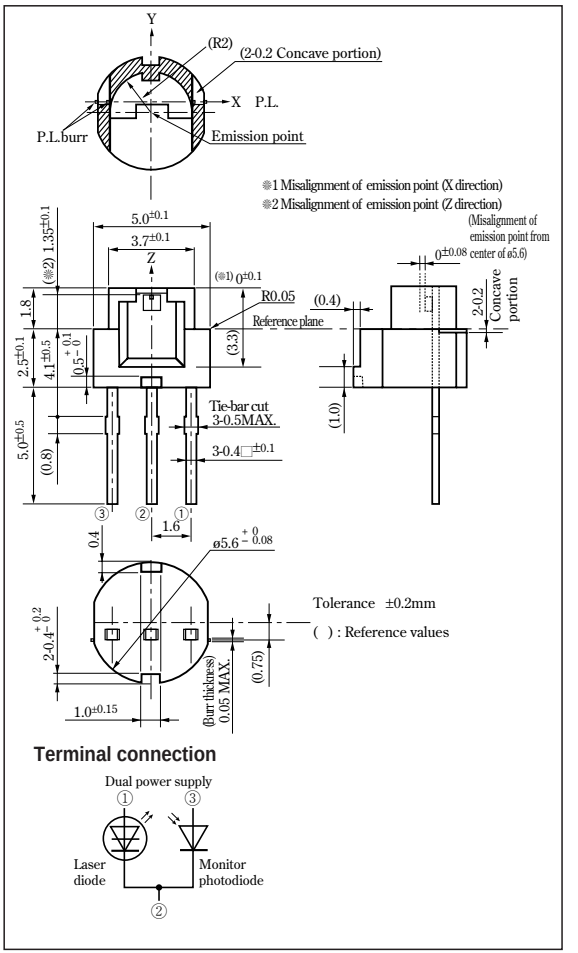
(1) ϕ5.6mm open type insert lead frame structure
(Optically compatible with the conventional ϕ5.6mm package)
(2) Maximum optical power output : 5mW (CW)
(3) Wavelength : TYP. 780nm
(4) Low current drive type

■ Applications

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

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

(Tc=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

※1 Case temperature
※2 At the position of 0.6mm or more from the lead base (5s)
※3 CW (Continuous Wave) drive

■ Electro-optical Characteristics※1

(Tc=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current		I_{th}	–	-	(12)	20	mA
Operating current		I_{op}	Po=3mW	-	(18)	25	mA
Operating voltage		V_{op}		-	(2.0)	2.3	V
Wavelength		λ_p		770	(780)	795	nm
Half intensity angle	※2※3 Parallel	θ//		6	(11)	18	°
	※2※3 Perpendicular	θ⊥		27	(40)	49	°
※4 Ripple		R_I		-20	-	+20	%
Misalignment angle	※3 Parallel	Δθ//		-2	-	+2	°
	※3 Perpendicular	Δθ⊥		-3	-	+3	°
Differential efficiency		η_d	$\frac{2mW}{I(3mW)-I(1mW)}$	0.35	(0.65)	0.95	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

(Tc=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	I_m	Po=3mW, V_{rd}=5V	0.02	(0.05)	0.1	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 N_2-purged box after opening the package to prevent silver oxidization or damage to solderability.

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  - Office automation equipment
  - Telecommunication equipment [terminal]
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  - 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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