GH06550B2B

Features

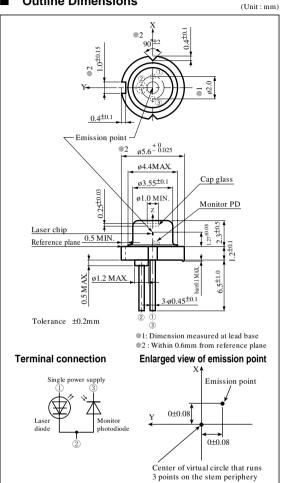
- (1) X2 speed DVD-R/+R/-RW/+RW/ RAM drives
- (2) High power output (pulse MAX. 70mW)
- (3) Wavelength : TYP. 656nm
- (4) Operating temperature : MAX. 70°C
- \$5.6mm package (5)

Applications

- DVD-R/RW drives (1)
- (2) DVD-RAM drives

High Power Red Laser Diode for ×2 Speed DVD Drive (656nm-50mW)

Outline Dimensions



Absolute Maximum Ratings



	•						
Param	Symbol	Rating	Unit				
*3 Optical power outp	Po	50	mW				
*2 Optical power outp	Pp	70	mW				
Reverse voltage	Laser	Vrl	2	V			
	Monitor photodiode	Vrd	30	V			
*1 Operating	*3 CW	Topc(c)	-5 to +65	°C			
temperature	*2 Pulse	Topp(c)	-5 to +70	°C			
Storage temperatu	Tstg	-40 to +85	°C				
*4 Soldering tempera	Tsld	300	°C				
*1 Case temperature *3 CW (Continuous Weys) drive							

*1 Case temperature

46

CW (Continuous Wave) drive

*2 Pulse width : 0.3µs, Duty : 50%

*4 At the position of 1.6mm or more from the lead base (3s)

SHARP

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Electro-ontical Characteristics*1

Electro-optical	Characteristi	ics ^{≉1}					(Tc=25°C)
Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current		Ith	_	-	35	55	mA
Operating current Operating voltage Wavelength		Iop		-	80	100	mA
		Vop		-	2.6	2.95	V
		$\lambda_{\rm P}$		650	656	660	nm
Half intensity angle	*2*3 Parallel	θ//	Po=45mW	6	8	10	•
	*2*3 Perpendicular	θ⊥		19	22	25	•
*4 Ripple		Rı		-20	-	+20	%
Misalignment angle	*3 Parallel	$\Delta \theta //$		-2	-	+2	•
	*3 Perpendicular	$\Delta \theta \perp$		-3	-	+3	•
Differential efficiency	7	η_{d}	35mW I(35mW)-I(10mW)	0.75	1.0	-	mW/mA
Interference pattern i	intensity	α	Po=45mW	-	-	1	-
*5 Kink		K-LI	P1=14mW, P2=42mW, P3=70mW	-10	-	+10	%
Polarization angle		ω	Po=3mW, NA=0.13	-20	-	+20	•
Polarization ratio		Pı		20	-	-	-

*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)

⁸⁴ R= $\Delta P/P \Delta P$: the maximum deviation of the far field pattern from its approximate curve P: the peak of the approximate curve

*5 Pulse drive (Pulse width : 0.3µs, Duty : 50%)

Electrical Characteristics of Photodiode

(Tc=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	Im	Po=45mW, Vrd=5V	0.01	-	0.2	mA
Dark current	Id	Vrd=5V	-	-	150	nA
Terminal capacitance	Ct	Vrd=5V, f=1MHz	-	3.5	-	pF

· Please refer to the chapter "Handling Precautions"



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- Industrial control
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- Consumer electronics

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- Alarm equipment
- Various safety devices, etc.

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