# GH16507S2A

(Under development)

#### **Features**

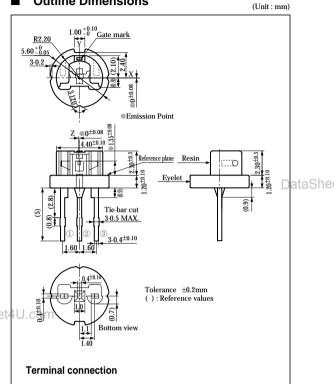
- (1) \$\phi 5.6mm\$ open type insert lead frame structure (Optically compatible with the conventional \$6.6mm package)
- (2) Employing a self-oscillating laser chip enables a compact and low cost pick-up. It eliminates the need for radio frequency modulation
- circuits and related resistors/shields. (3) Maximum optical power output: 7mW (CW)
- Wavelength: TYP. 654nm

## **Applications**

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

## Self-oscillating Type Insert Frame Structure, Red Laser Diode for DVD Video Player (654nm-7mW)

### **Outline Dimensions**



## Absolute Maximum Ratings

(Tc-25°C \*1)

- Absolute Max	(10=23 0 )				
Parame	Symbol	Rating	Unit		
*3 Optical power output		Po	7	mW	
Reverse voltage	Laser	$V_{\rm rl}$	2	v	
	Monitor photodiode	$V_{\rm rd}$	30	V	
*1 Operating temperature		Top(c)	-10 to +70	°C	
Storage temperatur	Tstg	-40 to +85	°C		
**2 Soldering temperature		Tsld	260	°C	

Case temperature

DataShee CW (Continuous Wave) drive

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<sup>\*2</sup> At the position of 1.6mm or more from the lead base (within 5s)

## ■ Electro-optical Characteristics\*1

(Tc=25°C)

Paramete	er	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Threshold current		Ith	_	-	(65)	85	mA
Operating current		Iop		-	(75)	91	mA
Operating voltage		$V_{op}$		-	(2.5)	3.0	V
Wavelength		$\lambda_{p}$		648	(654)	663	nm
Half intencity angle	*2*3 Parallel	θ//	Po=5mW	7	(8.5)	11	۰
	*2*3 Perpendicular	θΤ		29	(35)	42	۰
*4 Ripple		Rı		-20	-	+20	%
Micalianment angle	*3 Parallel	$\Delta \theta //$		-2	-	+2	۰
	*3 Perpendicular	Δθ⊥		-3	-	+3	۰
Differential efficiency		ηd	3mW I(5mW)-I(2mW)	0.25	(0.45)	0.75	mW/mA
Interference pattern i	ntensity	α	Po=5mW	-	-	0.9	-

<sup>1</sup> Initial value, CW (Continuous Wave) drive

<sup>®4</sup> R=ΔP/P ΔP: the maximum deviation of the far field pattern from its approximate curve P: the peak of the approximate curve

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## ■ Electrical Characteristics of Photodiode

(Tc=25°C)

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Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Output current	Im	$Po=5mW$ , $V_{rd}=5V$	(0.05)	(0.15)	(0.3)	mA
Dark current	ΙD	$V_{\rm rd} = 5V$	-	-	150	nA
Terminal capacitance	Ct	$V_{rd}=5V$ , $f=1MHz$	-	(9)	-	PF

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#### 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 axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the package to prevent silver axidization of the N2-purged box after opening the N2-purged box after axidization of the N2-purged box ar

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<sup>\*2</sup> Angle at 50% peak intensity (full-width at half-maximum)

et4U.com Parallel to the junction plane (X-Z plane), Perpendicular to the junction plane (Y-Z plane)

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