LT041NS/LT041NS9

High Power (Max.60mW CW), Compact Size Laser Diode for ×4 Speed CD-R

■ Features

(1) Maximum optical power output : 60mW (CW*)
(×4 CD-R writable, ×2 CD-R rewritable)
(2) 2 series wavelength depending on the demand of customers
(3) Low current drive (Operating current : TYP.98mA)
(4) Transverse mode
(5) Compact ϕ5.6mm package

*CW : (Continuous Wave)

■ Model No.

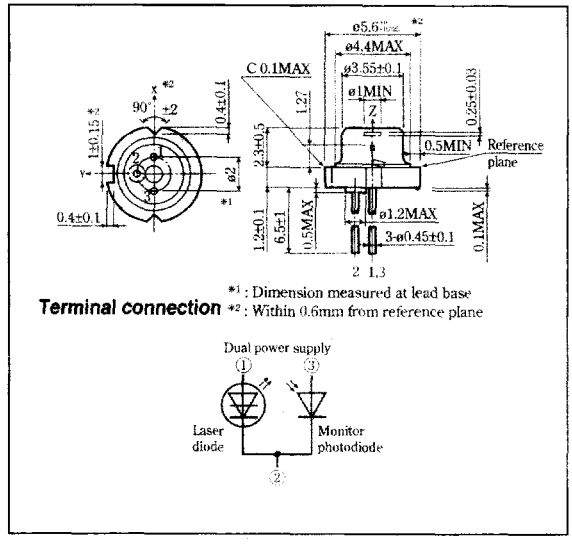
(1) LT041NS : Wavelength 780 to 795nm
(2) LT041NS9 : Wavelength 780 to 790nm

■ Applications

(1) CD-R / CD-RW drives

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

(Tc=25°C)

Parameter		Symbol	Rating	Unit
Optical power output	CW	Po	60	mW
	Pulse		*1 80	mW
Reverse voltage		VR	2	V
*2 Operating temperature		Topr	-10 to +60	°C
*2 Storage temperature		Tstg	-40 to +85	°C
*3 Soldering temperature		Tsld	260°C/5s	-

*1 Pulse width: 0.4ms, duty : 0.1%
*2 Case temperature
*3 At the position of 1.6mm or more from the lead base

■ 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=50mW		-	98	128	mA
Operating voltage			V_{op}	Po=50mW		-	2.15	2.5	V
Wavelength			λ_p	Po=50mW	LT041NS	780	788	795	nm
					LT041NS9	780	-	790	
Radiation characteristics	*2 Angle	Parallel to junction	θ//	Po=50mW		8	10	13	°
		Perpendicular to junction	θ⊥	Po=50mW		18	24	30	°
	Ripple		–	Po=50mW		-	-	±20	%
Emission point accuracy		Angle	Δø//	Po=50mW		-	-	±2	°
			Δø⊥	Po=50mW		-	-	±3	°
		Position	Δx,Δy,Δz	–		-	-	±80	μm
Differential efficiency			η	$\frac{40mW}{I\ (50mW) - I\ (10mW)}$		-	0.8	-	mW/mA
Coherence			γ	Po=0 to 60mW		-	-	1.0	-
Monitor current			I_m	Po=50mW		-	0.25	-	mA

*1 Initial value, CW drive

*2 Angle at 50% peak intensity (full-width at half-maximum)

■ Electrical Characteristics of Photodiode

(LT041NS)

(Tc=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Dark current	I_D	V_R=15V	-	-	150	nA

(LT041NS9)

(Tc=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Dark current	I_D	V_R=15V	-	-	150	nA

· Please refer to the chapter "Handling Precautions"