TENTATIVE

Photo IC for LASER power monitor

■ GENERAL DESCRIPTION

NJL8130R is Photo IC for Laser power monitor of CD-R/RW and Combination drive.

NJL8130R consists of high speed PIN photo diode and high-speed I-V amplifier. NJL8130R is adopted compact and thin COB package, which build-in the bypass capacitor. NJL8130R is well suited for slim drive.

■ FEATURE

- High speed response
- Gain adjustment by external VR
- Built-in the bypass capacitor
- Miniature, thin type (4.0mmX3.0mmX1.1mm)
- Reflow type

■ APPLICATION

- LASER power monitor for CD-R/RW and Combination drive etc

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	CONDITION	UNIT
Operating voltage	Vcc	10	V
Reference voltage	Vc	2.0 to 3.2	V
Operating temperature	Vopr	-30 to +85	°C
Storage temperature	Vstg	-40 to +100	°C

■ ELECTRO-OPTICAL CHARACTERISTICS (Ta=25°C,Vcc=5V,Vc=2.5V,RL=10KΩ,CL=10pF,VR=200Ω,λ=780nm)

PARAMETER	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
Operating voltage	Vcc	-	4.5	5.0	5.5	V
Current consumption	Icc	In the dark	3.0	5.0	8.0	mA
Output off-set voltage	Voff	In the dark	-10	0	+10	mV
Sensitivity	Gvout	λ=780nm,Po=10uW	-2.2	-2.9	-3.6	mV/uW
		λ=650nm,Po=10uW	-1.6	-2.1	-2.7	mV/uW
Response time	Tr	Vout=1.5V	-	7.0	-	ns
	Tf	Vout=1.5V	-	7.5	-	ns
Output maximum voltage	Vom	GND reference	-	1.0	1.2	V

Note 1) Output off-set voltage : Vc is the reference.

Note 2) Response time : Confirmation of design.

Note 3) Measurement by optical input : Measurement is made by emitting the light to all over the package.

Photo diode sensitivity: 0.47 A/W (λ=780nm)

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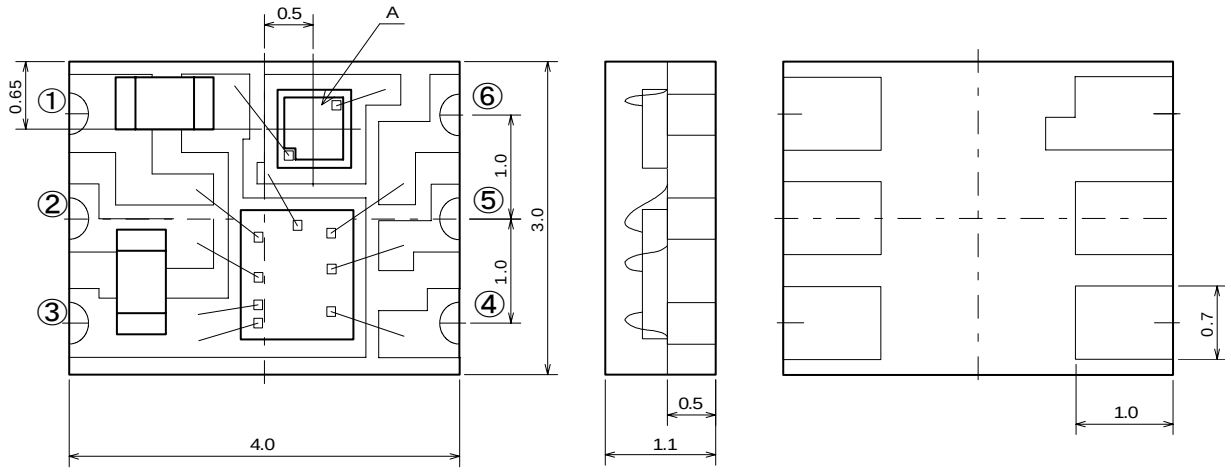
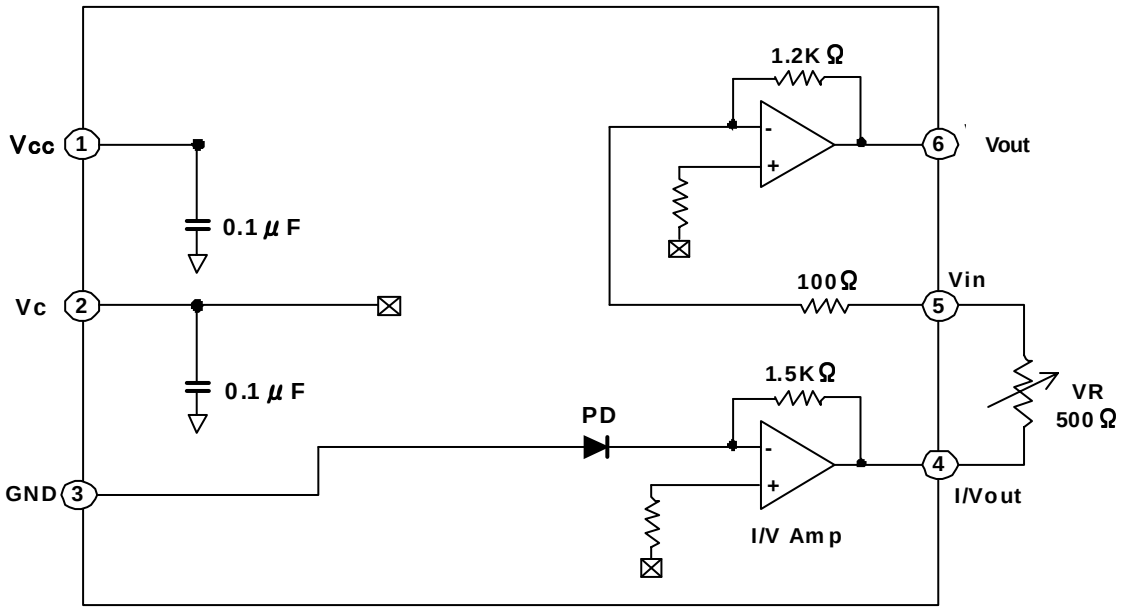
■ OUTLINE (typ.) Unit: mm

NJL8130R **A: Active area (0.6mm square)**



①:Vcc ⑥:Vout
②:Vc ⑤:Vin
③:GND ④:I/Vout

■ BLOCK DIAGRAM



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