

# HUL7254

## Hologram unit for CD/CD-ROM drive

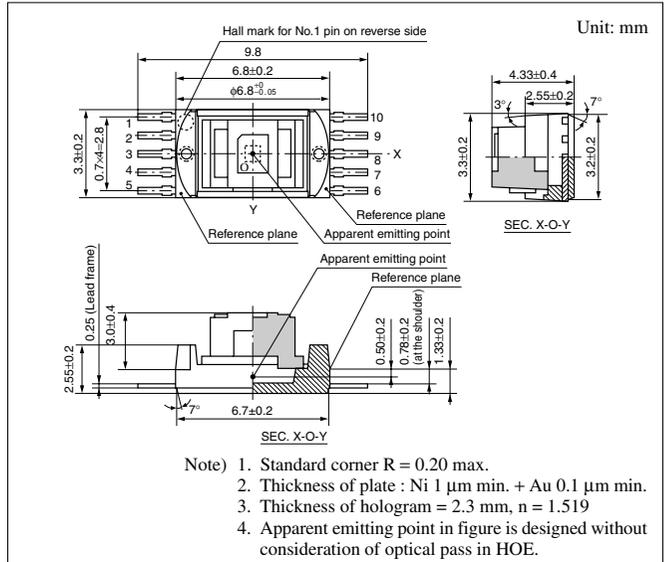
For optical information processing

### ■ Features

- Semiconductor laser and photodetector are integrated through using micro-mirror.
- Focus error signal detection: SSD method
- Tracking error signal detection: 3-beam method
- Low-power semiconductor laser included
- Built-in I-V conversion amplifier

### ■ Applications

- CD-ROM drive (slim type)

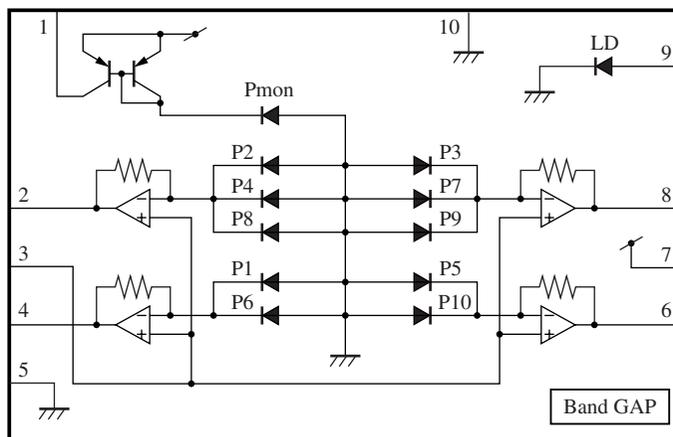


### ■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Laser beam output	$P_O$	3.6	mW
Laser reverse voltage	$V_{R(LD)}$	2	V
Supply voltage *	$V_{CC}$	6	V
Reference voltage	$V_C$	+1.3 to $V_{CC} - 1.3$	V
Operating ambient temperature	$T_{opr}$	-10 to +60	°C
Storage temperature	$T_{stg}$	-40 to +85	°C

Note) \*: Recommended supply voltage is 4.5 V to 5.5 V.

### ■ Block Diagram



## ■ Pin Descriptions

Pin No.	Description	Pin No.	Description
1	Mon. out	6	(P5 + P10) out
2	(P2 + P4 + P8) out	7	V <sub>CC</sub>
3	V <sub>C</sub>	8	(P3 + P7 + P9) out
4	(P1 + P6) out	9	LD(+)
5	GND	10	GND

## ■ Electro-Optical Characteristics

- Unit characteristic specifications T<sub>C</sub> = 25°C ± 3°C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Threshold current	I <sub>th</sub>	CW	15	30	40	mA
Operating current	I <sub>OP</sub>	CW, V <sub>RF</sub> = 570 mV, V <sub>CC</sub> = 5 V	20	35	48	mA
Operating voltage	V <sub>OP</sub>	CW, V <sub>RF</sub> = 570 mV, V <sub>CC</sub> = 5 V		1.9	2.4	V
LD power intensity out of objective lens	P <sub>OP</sub>	V <sub>RF</sub> = 570 mV, V <sub>CC</sub> = 5 V		0.18	0.30	mW
Focus error signal amplitude	V <sub>FE</sub>	V <sub>RF</sub> = 570 mV, V <sub>CC</sub> = 5 V	340	480	620	mV
Tracking error signal amplitude	V <sub>TE</sub>	V <sub>RF</sub> = 570 mV, V <sub>CC</sub> = 5 V	150	300	450	mV
Focus error signal defocus	D <sub>FO</sub>	V <sub>RF</sub> = 570 mV, V <sub>CC</sub> = 5 V	-8		+8	%
Tracking error signal offset	B <sub>TE</sub>	V <sub>RF</sub> = 570 mV, V <sub>CC</sub> = 5 V	-30		+30	%
Jitter	Jitter	V <sub>RF</sub> = 570 mV, V <sub>CC</sub> = 5 V			6	ns

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