

# HUL7207

## Hologram Unit

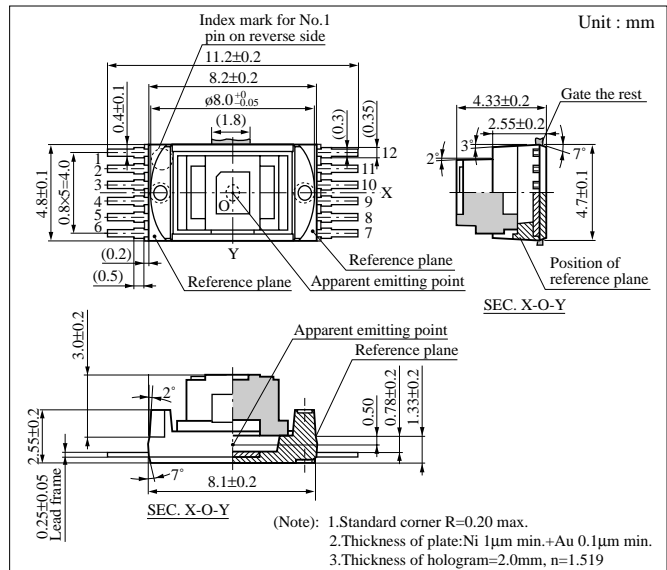
For optical information processing

### Features

- Smaller package size achieved through micro-mirror integration  
(4.8 × 8.2 × 4.3 mm)
- Fast response ( $f_c = 50$  MHz)
- Focus error signal detection : SSD method
- Tracking error signal detection : 3-beam method
- Low-power semiconductor laser included

### Applications

- CD-ROM drives  
(supports 40 time speed CD-ROM drives)



### Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rated	Unit
Laser beam output*1	P <sub>O</sub>	0.3	mW
Laser reverse voltage	V <sub>R(LD)</sub>	2	V
Monitor PD reverse voltage	V <sub>R(mon)</sub>	6	V
Supply voltage	V <sub>CC</sub>	6	V
Operating supply voltage range	V <sub>CC</sub>	+3.0 to +5.5	V
Reference voltage	V <sub>C</sub>	+1.3 to V <sub>CC</sub> -1.3	V
Operating ambient temperature	T <sub>opr</sub>	-10 to +60	°C
Storage temperature	T <sub>stg</sub>	-40 to +85	°C

\*1 Light emitting output through objective lens

### Unit Characteristic Specifications (Tc = 25±3°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Laser beam output*1	P <sub>O</sub>	V <sub>RF</sub> = 570mV, V <sub>CC</sub> = 5V		0.18	0.25	mW
Operating current	I <sub>OP</sub>	CW V <sub>RF</sub> = 570mV, V <sub>CC</sub> = 5V	25	35	45	mA
Operating voltage	V <sub>OP</sub>	CW V <sub>RF</sub> = 570mV, V <sub>CC</sub> = 5V		1.9	2.4	V
Oscillating wavelength	λ <sub>L</sub>	V <sub>RF</sub> = 570mV, V <sub>CC</sub> = 5V	775	795	815	nm
Focus error signal amplitude	V <sub>FE</sub>	V <sub>RF</sub> = 570mV, V <sub>CC</sub> = 5V	340	480	620	mV
Tracking error signal amplitude	V <sub>TE</sub>	V <sub>RF</sub> = 570mV, V <sub>CC</sub> = 5V	220	340	460	mV
Focus error signal pull-in range	D <sub>FE</sub>	V <sub>RF</sub> = 570mV, V <sub>CC</sub> = 5V	9	12	16	μm
Frequency characteristics	f <sub>C</sub>		40	50		MHz

\*1 Light emitting output through objective lens

■ Block Diagram of Circuit Functions

